



INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week

Noblesse Oblige
Luckiest Man of the Month
Wanna Buy a Town?
They're On the Right Track

Story of the Week

A noted opera star, who had passed into The Great Beyond, attempted to organize a magnificent intra-astral choir which would be so grandiloquent that it would put all previous heavenly choruses to shame.

Having been granted leave to perform this miracle, she requisitioned fifteen thousand contraltos, fifteen thousand tenors, and an equal number of basso profundos from the list of angels at her disposal.

"But what about the sopranos?" inquired her puzzled heavenly expediter.

"Are you kidding?" haughtily asked the famous warbler. "I'll sing soprano myself."

Noblesse Oblige

Last issue we had to skip the "Story of the Week," so to make up for it, here's a second yarn:

Immensely proud of their extraordinary Jersey bull, a farmer, his wife, and their twelve children waited in line impatiently at the entrance of the stock exhibit of the annual State Fair.

When informed that the admittance fee for his entire brood would total at least \$42, this exhibitor lost his temper.

"But we've been plannin' all year on seein' that champion bull win a blue ribbon," he protested. "Me and the family is goin' ta be a heap disappointed if we don't git ta see that bull when he's judged. And we just can't afford to pay \$3.00 apiece ta git in."

The ticket seller glanced down along the seemingly endless array of big-and-little boys and girls who were trailing the farmer and his wife.

"Do all those children belong to you?" he asked with a note of disbelief.

"Ya betcha they do," affirmed the farmer.

"Well in that case, here are fourteen complimentary tickets," said the seller, extending the Annie Oakleys. "Gad, we want that bull to see you!"

Luckiest Man of the Month

While watching Walter Daily work furiously and happily in the Bendix booth at the Home Furnishings Exposition in Chicago we picked up a news item from one of his less spectacular aides which makes us feel a bit sentimental.

Edwina Nolan has retired.

Well to recall the day when the dashing, glamorous, idea-popping Miss Nolan left the Northern States Power Co. up in Minnesota to take over the direction of home service activities for General Electric's refrigeration department in Cleveland.

Until Edwina arrived upon the scene, home economists were mere recipe concoctors. Edwina changed all that. Aided by her imagination, her vitality, and her gift for organization, "home economists" emerged from their caterpillar cocoons. They became product demonstrators, with an important merchandising mission. The home appliances which male salesmen sold, this new generation of women demonstrators kept sold.

No doubt all the appliance dealers who read this column are familiar with Miss Nolan's career, and with her contributions to the business, during her 13 years with G-E and her four with Bendix. Suffice it to say that she has been a pioneer, an innovator, and an imaginer; and that we're all in debt to her.

(Concluded on Page 8, Column 1)

Leads ASHVE



B. M. WOODS

His election as president of the American Society of Heating & Ventilating Engineers for 1947 was announced at the annual meeting in Cleveland last week.

K. M. Newcum Forms New Pittsburgh Firm

PITTSBURGH—K. M. Newcum, who recently resigned as vice president of Superior Valve & Fittings Co. here, has announced the formation of Remco, Inc. with himself as president.

Remco will manufacture both electrical and refrigeration equipment, Mr. Newcum said. For the refrigeration industry, the firm will turn out a comprehensive line of heat exchangers, driers, filters, and scale traps, he declared.

Associated with Mr. Newcum in the new enterprise are J. R. Richards, secretary-treasurer; and Walter P. Stewart, assistant treasurer.

Mr. Richards has been vice president and general manager of Steel City Electrical Co. here for 19 years. Mr. Stewart has served as assistant to the vice president in charge of engineering at Superior Valve for two years.

Remco now occupies part of the plant of the Pittsburgh Commercial Heat Treating Co., according to Mr. Newcum. It is leasing plant space left idle by the termination of war contracts and uses the existing equipment on a cost plus basis, he said.

"Manufacturing facilities include high frequency induction heating units, the Selas Gas-Air system and atmosphere controlled electric furnaces for brazing, silver soldering, and soft soldering in production quantities," Mr. Newcum stated.

By concentrating on the manufacture of heat exchangers, driers, and filters, it is possible for Remco to secure materials and set up schedules to produce a considerable volume of standard and semi-standard equipment starting in March, he declared.

Carrier Charges Dover Imitates Its Compressor

SYRACUSE, N. Y.—Carrier Corp. here last week filed suit in Federal Court against Dover Compressor & Machine Co., Inc., Dover, N. J., claiming that Dover was producing a refrigerant compressor in imitation of one produced and sold by the plaintiff.

The complaint further charged the New Jersey company with having "fraudulently procured confidential and secret information from former or present trusted employees."

Carrier Corp. asked for an injunction against production or sale of such compressors by Dover and damages for losses allegedly sustained.

Packaged Cooling Units Spotlited At Heating, Ventilating Show

By the Staff of the News

F. L. Jacobs Co. Workers Drop Portal Pay Suit

DETROIT—A \$1,500,000 portal-to-portal suit against the F. L. Jacobs Co., Detroit, manufacturer of home appliances and automotive parts was dismissed in U. S. District Court Monday, Jan. 27, when all employees named in the suit withdrew the complaint against the company.

The suit had been filed by 15 employees on behalf of other employees, and by Blaine Marrin, financial secretary of Local 157, United Automobile Workers-CIO, as representative of certain employees of the company.

It was alleged that there was in excess of \$750,000 due 1,200 employees, and the suit sought an equal amount in liquidated damages.

A company statement said:

"The portal-to-portal suit brought by the CIO union against F. L. Jacobs Co., has been dismissed by Court order after all employees named in the suit withdrew the complaint against the company.

"At the time there was pending a motion by the company attorneys to require information to be filed by the Union upon which a counter-suit could have been filed. The company has believed at all times that there was no basis for this portal-to-portal suit. The company provided their employees with a very satisfactory place of work and the Union withdrew its action after it was clearly demonstrated that there was no basis for 'walking time' or other grounds for a portal-to-portal suit."

Rheem Plans to Purchase Fraser Appliance Business

STOCKTON, Calif.—Rheem Mfg. Co. has announced that it will buy the entire appliance and gas furnace business of the Fraser Furnace Co. The purchase will include patents, designs, trade name, inventories, and certain manufacturing equipment.

Bankers Told Refrigeration 'Safe to Finance'; \$3 Billion Appliance Volume Seen for 1947

ST. LOUIS—Refrigeration equipment—thousands of dollars of it—must be accessible to the nation's retail food stores if they are to stay in the competitive picture.

That was the substance of a talk delivered by Lehman Plummer, Des Moines, Iowa, banker when he addressed a consumer and installment credit conference sponsored here recently by members of the American Bankers Association.

Referring to the role of refrigeration goods in the credit picture, Mr. Plummer stated:

"That equipment has long life, pays for itself in savings on food spoilage, and is necessary to alert, modern merchandising. For that reason it is safe to finance."

As for the appliance field, J. L. Busey, president of the National Electrical Wholesalers Association, foresaw volume this year reaching something like \$3 billion. Of this amount he said, over \$2 billion will probably represent refrigerators, home freezers, radios, and other appliances with sufficiently large unit value to meet requirements for time

CLEVELAND—The estimated 8,000 to 10,000 persons attending the Seventh International Heating & Ventilating Exposition in Lakeside Hall here last week were evidencing a keen interest in the many new advances in heating, cooling, and ventilating techniques being shown, and manufacturers were reporting that it would be some time yet before they would catch up with the backlog of orders for such equipment.

While exhibits of equipment designed to handle the heating function constituted possibly better than 75% of the exhibits, the "cooling" systems—particularly in package air conditioners—were in many cases stealing the show, although there were not many innovations in this type of equipment.

One tendency worthy of note was that of a few manufacturers

S. R. Hirsch Named Vice President of American Coils

NEWARK, N. J.—S. R. Hirsch has been named vice president of American Coils Co. and has assumed charge of the firm's new plant here. It will be known as Plant II and makes the seventh addition to Amcoil's facilities in recent months.

Mr. Hirsch comes to Amcoil from Brunner Mfg. Co., Utica, N. Y., where he was chief engineer. He was previously with Worthington Pump & Machinery Corp. of Harrison, N. J., as assistant chief engineer. Mr. Hirsch has been connected with the refrigeration industry for the past 20 years and was recently named a director for the National ASRE.

Michael Parcaro, Amcoil's executive vice president and general manager, announced that the company's Lexington Street plant and the six additions completed in 1946 will be used for manufacturing and warehousing Amcoil refrigeration cooling units. The new plant with Mr. Hirsch in charge will concentrate on the assembly of the Amcoil De Luxe Food Conditioners, the Zero Breeze Low Temperature Automatic Defrost units, and five new lines of air conditioning equipment.

The new air conditioning lines which Amcoil will have ready for the 1947 season are: a line of ¼-hp. self-contained "Latonaire" and

(Concluded on Page 4, Column 4)

who had hitherto confined their efforts strictly to the production of heating equipment, introducing packaged room cooling equipment (generally an assembled unit).

A representative of the Bard Mfg. Co., one of the heating equipment firms that did this, said that "we just did this to fill out our line for our dealers, but we're finding that most of the interest in our exhibit is on this packaged air conditioner."

Plans for the next exposition have not been announced. But it is believed that the show will be repeated in January of next year, probably in an eastern city.

Attendance reached a record 2,200 at the fifty-third annual meeting of the American Society of Heating & Ventilating Engineers held Monday through Thursday at the Statler hotel here last week. Two main events of this meeting were the dedication of the society's new research laboratory in Cleveland, said to be the only one in the country operated by an engineering society, and an open forum on radiant and panel heating, where "Standing Room Only" signs were hung up, indicating the tremendous popular and engineering interest in the subject.

Spring meeting of the ASHVE will be held next June 2 to 4 at the Hotel del Coronado, famed resort just across the bay from San Diego.

Complete coverage on equipment exhibited in the Heating & Ventilating Exposition will appear in subsequent issues of the News with pictures.

Calif., it was announced. (This is the week preceding the spring meeting of the American Society of Refrigerating Engineers in Los Angeles.)

B. M. Woods' election as president of the society for the coming year was likewise announced. Other officers include C. L. Tuve, first vice president; A. V. Stacey, Jr., second vice president; and J. F. Collins, treasurer.

Some of the products shown which were gaining top attention at the show were the "precipitator" type of air cleaning systems shown by American Air Filter, Raytheon Mfg. Co., and Westinghouse; a new Airtemp room conditioner for either floor or window mounting; packaged room air conditioners by Worthington, Westinghouse, York, American Thermal Industries, Kauffman, and others; a new window air conditioner with a compact ¼-hp. condensing unit by Viking Mfg. Co.; a new type window ventilator with new type control features by U. S. Air Conditioning Corp.; and the Drayer-Hanson "Airtopia" reverse-cycle air conditioner which attracted a tremendous amount of attention.

One of the more interesting innovations of the week, and one which turned up a lot of interesting information, was the "press party" held by the Norge-Heat division, with Howard Blood, Norge president, and C. S. Davis, Jr., vice president and general manager of the Norge-Heat division, as hosts. In a round-up discussion by trade press editors,

(Concluded on Back Page, Column 2)

(Concluded on Page 4, Column 5)

Montana's Legislature Eyes Locker Inspection To Curb Cattle Rustling

HELENA, Mont.—Enactment of a bill which would require sanitary inspection of food lockers, and inspection of the skins of animals before they are stored in frozen lockers, was proposed in the Montana Legislature by Rep. Milton Simpson, Custer Republican.

Rep. Leonard J. Esp, Sweet Grass Republican, chairman of the House livestock committee, said the measure was designed primarily to curb cattle rustling by persons who used frozen lockers for quick concealment of carcasses. He explained there now is no authority by which an officer could open a person's private locker for inspection of its contents.

Rep. Esp said the bill also was aimed at protecting the health of persons who use the lockers. Some lockers, he asserted, failed to come up to standards.

United Air Lines' Cargoliner '230' Can Carry 9-ton Refrigerated Load

CHICAGO—Equipped with a dry ice-methanol system, the new four-engined Cargoliner 230's now flying the routes of United Air Lines can carry a maximum load of 9 tons under refrigeration, the company has announced.

Located in the forward belly pit, the refrigeration equipment is tied in with the plane's ventilation system and electronic thermostatic control to provide low temperatures in flight or on the ground for flowers, fruits, vegetables, and other perishables.

When it is desired to refrigerate only a portion of the plane, the aft section can be closed off with a thermo-sealed curtain equipped with dry ice pockets to provide refrigeration for more than 300 cu. ft. of space and a load of 1,000 lbs.

Air for the cooling system is supplied through an air scoop on the

lower side of the fuselage just aft of the nose wheel well. The air is directed through two aircraft steam radiators to an electric motor-driven blower, thence through a duct up the side of the front cargo pit through a "wyne" and a check valve to the standard C-54 heater and overhead duct system.

To provide refrigeration a sublimation tank installed in the forward part of the plane is charged with approximately 150 lbs. of dry ice and 6 gals. of isopropyl alcohol. The resultant coolant, which is at temperatures between -60° and -80° F., is pumped by a modified electrically driven "Romec" pump through the two steam radiators. Temperature of the air leaving the radiators can be adjusted to any desired degree by a Fenwall switch, which automatically controls the operation of the pump, it is claimed.

The blower is actuated by a micro-switch incorporated into the damper control valve of the conventional heating and ventilating system. When the damper is placed in a "closed" position, shutting off the top air scoop, the blower turns on automatically to supply refrigerated air to the cabin air ducts.

These air ducts, branching out from a central overhead duct, are formed by the white plastic Plyon lining of the plane. The lining is attached to the ribs or frame of the ship with aluminum fittings, providing air spaces.

Wilson Freezer, Inc., Occupies Larger Building In Mt. Vernon

NEW YORK CITY—Wilson Freezers, Inc., manufacturer of frozen food cases, ice cream cabinets, and reach-ins here, moved Feb. 1 to Mt. Vernon, where it occupies a building consisting of 30,000 sq. ft. at 460 S. 10th Ave.

The firm, which is headed by Pete Pass, chief engineer, and Sidney Grossman, sales manager, recently organized an export department headed by Jack Joonas.

Air Terminals To Get Refrigeration Facilities

CHICAGO—To insure garden-fresh delivery of perishables, United Air Lines, Inc. plans to install refrigerated trailer units and stationary walk-in boxes at several key air terminals throughout the country.

The five mobile refrigerated trailer units, scheduled for assignment here, and at Detroit, Newark, New York, and San Francisco airports, are so designed that they can be backed up directly to a plane's cargo door. They are manufactured by Fruehauf Trailer Co. in a 1,325-cu. ft. capacity.

With temperature controls automatically adjustable to any temperature from 0° to 50° F., the mobile units provide for more efficient ground handling of such perishables as flowers and frozen foods, stated C. J. Rausch, director of cargo service.

Refrigerated walk-in boxes, each with a capacity of 620 cu. ft. are being installed by United Air Lines at air freight terminals in Boston, Philadelphia, Cleveland, Omaha, Denver, Sacramento, Los Angeles, Oakland, and Eugene (Ore.)

Wm. M. Orr Co. Incorporates; Policy, Personnel Not Changed

PITTSBURGH—William M. Orr Co. has recently announced the incorporation of its refrigeration division under the name of Orr, Inc. H. Whiting Holt is president and William M. Orr is treasurer.

The change was effected to better serve its customers and simplify operations. Policy and personnel will remain the same, Mr. Orr reported.

Refrigerated 'Will Call' Service Helps Employed Wives Buy Perishables

RIVERSIDE, Calif.—One of the worst problems of the employed wife—how to shop for fresh vegetables, and other perishables, when most of these have been snapped up by her housewife sisters long before she is through with the day's job—is being solved at Lewis Food Stores here, through an unusual "refrigerated will-call service."

Under this plan, each of the Lewis stores provides a 60-cu. ft. reach-in refrigerator space, in which perishable food products may be stored through the day. Thus, the wife who works downtown may hustle into the store early in the morning, grab those commodities which she normally has no chance to buy, and "check them" to be picked up on her return trip in the evening. The idea has proven a godsend to many thousands of young married couples cooking at home.

Making such service possible was the relocating of a standard reach-in dairy refrigerator in a center wall of the store, so that one side faces into the grocery department, the other into a side aisle. Six 2 x 4 ft. doors were cut into the back of the refrigerator, wooden shelves applied, and the whole enclosure painted white with a sign lettered "Refrigerated Will-Call Service—See floor hostess or checking stand."

From 35 to 75 women per day depending upon the items offered, are making use of the plan at present. Both perishable foodstuffs and other items are stored in the refrigerator, to save repackaging and extra trouble. All are kept refrigerated to 40° F. through the working day, to be in perfect condition when the owner picks them up.

The woman hostess on hand for just such services at the Lewis store handles the entire operation. After the customer has paid for her food at the checkstand, she calls the hostess, writes her name and address on the package, and the hostess locks it up in the refrigerator.

The process is reversed at the end of the day when the customer calls to pick up the order. Young working wives thus get an opportunity to please hubby with tasty meals on an equal basis with the housewife.

NEW NO. 47 CATALOG

READY MARCH 15TH 1947

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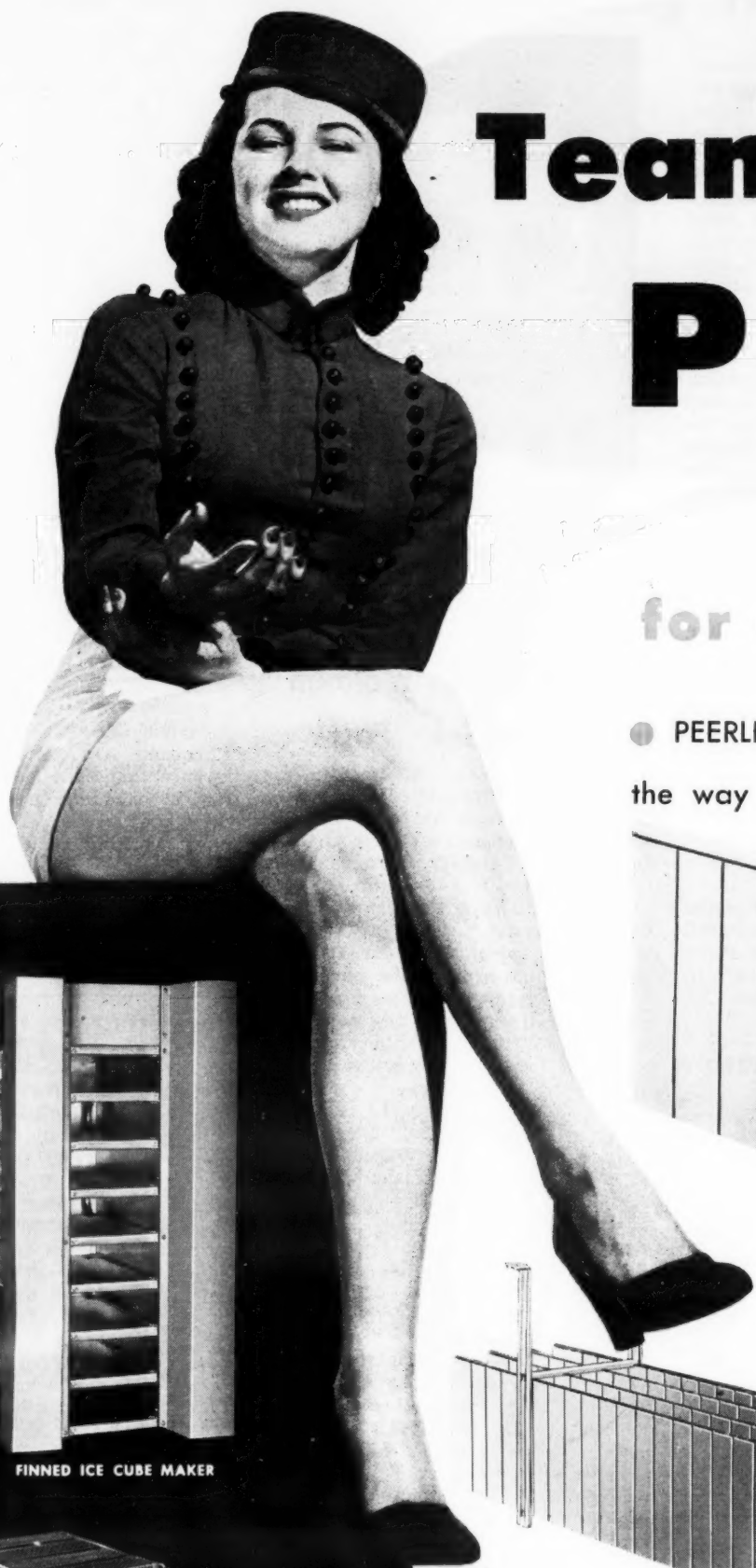
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FINNED ICE CUBE MAKER

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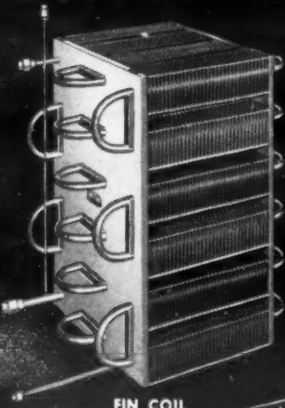
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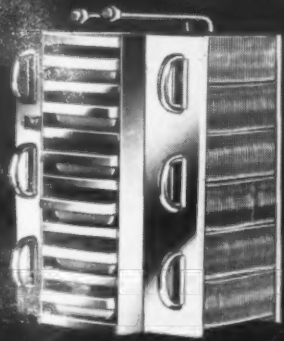
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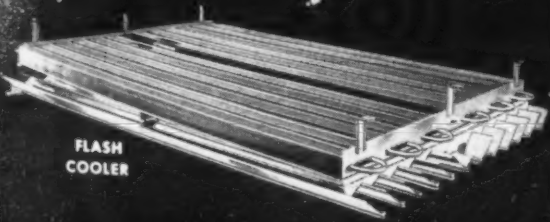
ICE CUBE MAKER



FINNED ICE CUBE MAKER



OFF CENTER
COIL



FLASH
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**National Business Publications
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New styles, more complete showings, and more available merchandise are the expectations of Frank K. Runyan, president of the Mart.

With regard to the locker show next September, it was announced that the Frozen Food Locker Institute will make its headquarters in the Hotel Muehlebach, where 200 rooms have been reserved.

E. W. HAEFNER

Mr. Haefner, who served one year with the Army in World War I and three years in World War II, joined Chrysler's Airtemp division in 1939.

The five-day period will be separated into general sessions and group meetings. H. F. Lehman, assistant general sales manager, will be in charge of the general session during the opening day and L. A. Clark, assistant general sales manager, will head the program for Feb. 4. Group meetings, in charge of various departmental heads, will follow Feb. 5, 6, and 7.

The company's "Latenaire" units were formerly promoted under the name of "Comfortaire" Conditioners. The "Sensaire" name will henceforth designate the company's conventional-type cooling units for use in warm, dry climates. Self-contained cabinet models in both the "Latenaire" and "Sensaire" types will receive the major impetus of Amcoil's promotional efforts in 1947.

Roscoe R. Rau, executive vice president of the National Retail Furniture Association told the conference that as a consequence of the rise in consumer instalment buying, furniture stores would need much more working capital.

Support for the bill would be forthcoming from the Banking and Currency Committee, Rep. Hagen said, adding that Representative Jesse P. Wolcott, chairman, as well as other members of the Committee, had already indicated they would help the proposed bill along.

The eastern troupe will hold meetings in Bridgeport Feb. 10 and 11 for New York district distributors, and Feb. 13 and 14 for New England distributors. It will then hold sessions in Philadelphia Feb. 17 and 18, in Chattanooga, Tenn., on the 21st and 22; in Chicago on the 24th and 25th; and in Cleveland Feb. 28 and March 1.

The western troupe's stops will be in Kansas City, Feb. 10 and 11; Dallas, on the 13th and 14th; Los Angeles, 17th and 18th; San Francisco, 20th and 21st; Seattle, 24th and 25th; and Salt Lake City, Feb. 28 and March 1.

A. E. McIntyre, formerly manager of the Nordstrom Valve Div. plant in Oakland, Calif., has been transferred to Pittsburgh as general manager of the company's Equitable Meter Div. He also will continue as manager of the Nordstrom Div.

PALEY ENGINEERED REFRIGERATION • PALEY ENGINEERED REFRIGERATION • PALEY ENGINEERED REFRIGERATION • PALEY ENGINEERED REFRIGERATION • PALEY ENGINEERED REFRIGERATION

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Galson Opens Syracuse Office as Consultant

SYRACUSE, N. Y. — Henry L. Galson has announced the opening of his own office in the Chimes Bldg. here as a consulting engineer specializing in the design and development of refrigeration and air conditioning equipment.

For nine years he has been project supervisor responsible for the development of room coolers and other air conditioning equipment for Carrier Corp. Before joining Carrier, he had charge of air conditioning product design at the Baldwin Southwark Corp.

Identified with the industry for 20 years, Mr. Galson was awarded the John Scott medal in 1933 for his pioneering work in self-contained air conditioning unit development embodying heating by reverse cycle.

He is said to hold more than 15 patents in the air conditioning refrigeration and industrial processing fields. He has written several papers and lectured on air conditioning at Drexel Institute in Philadelphia and at Syracuse university.

Mr. Galson received his degree in mechanical engineering from the Technical university in Vienna. He has carried on advanced studies at the University of Pennsylvania and at Temple university.

Buffalo-New York Trains Will Be Air Conditioned

BUFFALO — The streamlining of passenger coaches for service on Buffalo-New York trains with all cars being mechanically air conditioned, has been announced by the Lehigh Valley Railroad. The car modernization program already is underway in the railroad's Sayre, Pa. shops.

A spokesman here said the railroad still is uncertain as to how many of its cars will be modernized. The completely rebuilt cars, he said, will be used on all of the Lehigh's mainline trains. Cost of the modernization project was not made known.

Delivery of the streamlined and air conditioned coaches will depend on the flow of essential materials into the railroad's shops. The cars will be a further refinement of the streamlined coaches built for the Lehigh's "Black Diamond Express."

Carrier Awarded Contract For Hotel-Dept. Store

CINCINNATI—An unusual job of postwar air conditioning, and one of the largest, totaling \$880,000, has been awarded to Carrier Corp., Syracuse, N. Y., for the \$8,000,000 Terrace Plaza hotel and store now being built at Sixth, Race, and Vine Sts. here.

The first seven floors of this 17-story building will be occupied by a department store, while the remaining 10 will be a modern hotel.

Carrier Corp. is installing three centrifugal compressors of 250, 550, and 700-ton capacity to air condition 295,000 sq. ft. of space in the store section, including public assembly spaces, plus 348 hotel guest rooms on the upper 10 floors. Carrier's conduit "weathermaster" system is being used for the hotel rooms.

WANTED REGIONAL MANAGER

A large, nationally-known manufacturer offers an opportunity for permanence and advancement to a capable sales leader. Products of advanced design and competitively priced—covering the heating, air conditioning and commercial refrigeration fields—are supported by a powerful, nationwide advertising and promotion program. Experience in the major appliance field desirable but not essential. Applicants must know dealer operations, specialty selling and merchandising; be able to help train dealers' sales forces and, above all, possess sound business judgment. This is a real opportunity for a capable, ambitious man. A good salary, traveling expenses, automobile furnished, and complete executive cooperation assured. Write fully stating experience, personal qualifications, and salary desired. Accompany with photograph.

Box 2220,

Air Conditioning & Refrigeration News

Air Conditioning Helps U. of Omaha Absorb Record Enrollment

CHICAGO—Faced with fat enrollments and thin building prospects, school authorities are turning to air conditioning as one way to ease the burden of crowded classrooms and overtaxed facilities.

In the forefront of studies now being made is the record of the University of Omaha which, before the war, gained the distinction of becoming the world's first completely air conditioned university at an added cost of only 3 cents per cubic foot to the original cost of the buildings.

Now overshadowing that distinction is what air conditioning has accomplished for the university since the war as enrollment has doubled and the year around school program has expanded in both size and scope. Combining winter heating and summer cooling throughout 1,750,000 cu. ft. in 200 classrooms, here are some of the results as reported to the Refrigeration Equipment Manufacturers Association:

1. Despite twice as many students,

classroom facilities are employed to capacity with the air in each of the school's 200 rooms regulated according to the percentage of occupancy.

2. Kitchens and laboratories are freed from objectionable air and therefore may be used longer and more frequently.

3. Summer school enrollments have increased because of the comfort of the classrooms—the university's summer school has students from 40 other institutions.

4. Teachers are easy to engage during the summer—usually only one call is necessary.

The university's air conditioning system provides controlled temperatures 12 months in every year—an advantage that is being viewed by educators in terms of either lengthening the school year or otherwise employing school facilities continuously and without the interruption of vacation periods.

In addition to maintaining 72° F. heat throughout the winter and 72 to 79° F. temperatures in the

summer, depending on outside weather, the system washes and filters the air and controls humidity. These features are adaptable to the year around weather in Omaha, but school officials call attention to the value of the cooling features in Southern schools where cooling the air alone would provide unusual benefits.

Reports from the Omaha school and other air conditioned educational institutions also point out that comfortable temperatures are conducive to raising scholastic standards and attendance records, and eliminate the loss of efficiency caused by excessive heat and humidity on the part of instructors and students alike.

Complete air conditioning at the University of Omaha was voted by the school's regents following consideration of an architect's plan for incorporating cooling equipment to operate in conjunction with already installed heating facilities of the structure which consists of a center

building four stories high and two wings of three stories each—actually, three buildings in one.

Cooling equipment consists of two wells for supplying water, of which about 135,000 gallons are used on an average Omaha summer day, a mechanical refrigeration system, and two storage reservoirs. Water pumped from the wells to a 100,000 gallon reservoir travels to the refrigerators, then to the cooling coils and condensers and finally to a second reservoir, from which it is circulated for cooling. Following use, the water is used for lawn sprinkling or diverted to sewers.

Other steps featured in the system include 4-in. insulation on the third and fourth floor ceilings, an air space of 1 in. between the school's 16-in. brick walls and the inside plaster, double glass and weather stripping on all the buildings' 460 windows and the installation of separate exhaust systems to dispose of "used" air from kitchens, laboratories, and other rooms.



Empty "FREON" Cylinders

The shortage of cylinders continues. To meet current demands for "Freon" we must make use of every available cylinder. EMPTIES are urgently needed NOW.

You can help. Check *all* cylinders you have on hand. Return empty "Freon" cylinders at once . . . today, if possible. We'll pay the freight. Ship them to: Kinetic Chemicals, Inc., Carney's Point, New Jersey.

This handy memo may help you to speed return of empty "Freon" cylinders. Please forward it to the proper person or department . . .

TO _____

DEPT. _____

We've had an urgent appeal from the "Freon" people to return all empty "Freon" cylinders at once. Check *all* cylinders we have on hand. Arrange to return empty "Freon" cylinders as soon as possible. Ship them freight collect to:

Kinetic Chemicals, Inc.
Carney's Point, New Jersey

Unusual Color Scheme Sets Off Displays In Greenwich Appliance 'Sales Laboratory'

By George Hanning

GREENWICH, Conn.—Designed to act as a sales laboratory to provide first hand appliance merchandising information for the Geyer, Cornell, and Newell advertising agency, the Greenwich Home Appliance Co. was established here recently by H. W. Newell, a partner in the agency. Several interesting experiments in sales promotion and merchandising are now underway.

Located adjacent to the Greenwich town hall, the store occupies part of a 33 year old building which has been renovated into one of the most modern appliance outlets in the East, according to Edwin T. Wolf, manager.

Mr. Wolf was formerly associated with the Westchester Power & Light Co.

Especially striking is the color design of the store's interior. One side wall is done entirely in Chinese red. The opposite wall is painted a light gray. The Koroseal covered floor is gray punctuated with rows of black squares.

An arch separating the appliance room from the radio room behind it is also Chinese red.

Chinese red makes a fine display background for the white enamel refrigerators and washers, according to Mr. Wolf. To further enhance the background, he plans to have murals following an appliance use theme painted on the upper portion of the red wall.

Along part of the gray wall stands a display rack for small traffic appliances. An island counter in the

center of the floor also contains traffic appliances.

Off the radio display room to the rear is a television studio. This studio is painted in light tan irregular stripe design that closely resembles a soft colored wall paper. The floor is carpeted and the lone window is covered by floor length drapes.

Though close attention has been paid to the design of the store to get customers in a buying mood once they are within doors, no effort has been spared in getting them to the door.

To announce the store's official opening last October, 3,000 extra copies of the local newspaper, the *Greenwich Time*, were purchased and distributed at the railway station to

Refrigerators Stand Out Against Chinese Red



Since the above photo of the Greenwich Home Appliance Co. was taken, a stand for traffic appliances has been installed against the left wall. Manager Edwin T. Wolf plans to have an appliance mural painted on the upper portion of the Chinese red wall on the right where his line of refrigerators and automatic washers is displayed.

New York City commuters.

This issue contained a front page story on the opening of the new appliance store and its associated Nash auto dealership, a half page of pictures on an interior page, and a huge double page advertisement in the center of the paper.

In addition, a green sticker was attached to the upper left hand corner of the paper calling the reader's attention to the opening.

Since the store opening, Mr. Wolf has had two women making a survey of the Greenwich trading area to determine the appliance needs of the territory. Their job is to find out who wants appliances and what ones.

At first, Mr. Wolf said, the survey was made on a general basis and the store was not tied-in in any way. This survey netted a surprisingly poor response.

Mr. Wolf then switched to a direct survey whereby the surveyor told the housewife that she was a representative of the Greenwich Home Appliance Co. This type survey has brought a much better response to the queries.

Response to the new appliance store was immediate, Mr. Wolf said. In fact, before the store was even officially opened, people would drop around and enter their names for appliance purchases.

The store now has quite a backlog of appliance orders, he declared.

Mr. Wolf explained that he does not follow any strict priority system in filling orders.

On refrigerators, for instance, he has been getting an allocation of 10 units per month. When an allocation is due, he calls the names on his list and asks if the customer is ready

to take delivery. He calls veterans first, then, usually, persons who have left a deposit on a refrigerator, and finally those who have left only their name.

When he gets 10 customers ready to accept delivery, he sends their names and addresses to the warehouse and the refrigerators are shipped from there.

According to Mr. Wolf, all employees of the Greenwich Home Appliance Co. share in the profits, have paid vacations, and are covered at no personal expense with life, accident, and health insurance, as well as hospitalization for themselves and families.

They also have a spacious rest room with lockers, a radio, refrigerator, coffee-making machines, and tables and chairs for lunching facilities on the second floor. Adjoining the employees' room is a lavatory and shower room.

Appliances carried by the firm are Kelvinator electric refrigerators, electric ranges, home freezers, electric water heaters; farm size Victor home freezers, to name a few.

REFRIGERATION ACCESSORIES

- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two-Temperature Valves.
- Equalizer Tanks.
- Carbonators and Cooler-Carbonators.
- Accumulator Heat Exchangers.
- Instantaneous Draft Beer Coolers.
- X-Ray Refrigerating Units.
- Self-contained, Cabinet type Drinking Water Coolers.

TEMPRITE PRODUCTS CORP.
47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

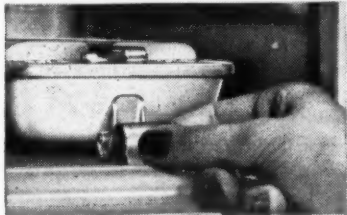
It's Sensational— The Entirely New INLAND HANDI-CUBE TRAY

Available in two new models—colorful plastic grids—or standard aluminum grids. Also plastic or metal tray lifters optional on either model.

Sensationally new in every detail, the versatile Inland Handi-Cube Tray offers you a choice of grids—either standard aluminum or lovely pastel-tinted plastic.

Certainly you'll want to see this attractive revolutionary ice tray which delivers ice cubes with unprecedented ease.

Just trip the lever and feel the rugged actuating mechanism respond with any quantity of ice cubes, instantly—each one full



A slight pull on the metal tray lifter, as shown, loosens the tray from the freezing compartment.

sized and dry. It's strong and husky for permanent ice releasing service.

Graceful lines, sensational performance, and eye-catching beauty—all combine to speed the sale of this new, postwar Handi-Cube Tray.

For full particulars and prices write to—
INLAND MANUFACTURING DIVISION, General Motors Corporation, Dayton, Ohio

FAST FREEZING
QUICK RELEASING

ICE TRAYS BY INLAND



coolstream
creates
the
contemporary
cooler

EVOLUTIONARY IN ENGINEERING • REVOLUTIONARY IN DESIGN

clearly conceived...
cleverly executed...
for modern installations.

ask your distributor to show you the new coolstream electric water coolers.

THE **COOLSTREAM** CORPORATION
240 Butler St., Brooklyn 17, N.Y.

Output Nets Kelvinator \$4 Million In Profits

DETROIT—Nash-Kelvinator Corp. reports a net profit after taxes for the first quarter of its fiscal year ended Dec. 31, 1946, of \$4,100,040, amounting to 84 cents per share. This compares with a loss of \$638,857, after tax adjustments, for the corresponding period of the previous fiscal year.

During the quarter, as a result of improved flow of materials, production of Nash automobiles and Kelvinator and Leonard appliances, including household refrigerators, home freezers, electric ranges, ice cream cabinets, and other commercial refrigeration products, increased to substantial levels, after a year of production constantly interrupted by shortages.

Many materials, notably steel, continue to be in short supply according to George W. Mason, president, and as a result the production program remains dependent upon the steady flow of materials. Mr. Mason said that sales and promotional expenses during the quarter were below normal outlays for such purposes. These expenditures are expected to be increased in subsequent quarters, consistent with output and promotional needs.

Demonstrators Trained for New Bendix Ironer

SOUTH BEND, Ind.—Home service directors of 25 distributors were trained at Bendix Home Laundry Institute here recently to assume direction of both pre-sale and post-sale demonstrations of the new Bendix automatic ironer.

Balance of the home service directors for Bendix Home Appliances' 54 other distributors were schooled in the field or will be trained soon.

Every Bendix automatic ironer will be demonstrated by a trained woman in the home of the purchaser, it was announced by Robert J. McDonald, manager of the ironer division. The program of post-sale demonstrations will be headed by distributor home service directors in connection with the already established system of demonstrating the Bendix automatic washer in the homes of those who purchase models.

Deliveries of Bendix automatic ironers to distributors and dealers are already in progress said W. F. Linville, general sales manager.

Bridge Will Connect May-Stern With Appliance Dept. Next Door

PITTSBURGH—Two floors in the building next door to the May-Stern Co. here have been rented by the department store for use as an appliance department. The company is constructing a bridge to connect the two buildings. Samuel W. Moss, the firm's merchandise manager for appliances, recently retired.

for TEMPERATURE* for MOTOR OPERATION*

2 Recorders*
for LESS than the
PRICE of ONE

The TEMPSCRIBE Recorder is outstanding for its universality. Any TEMPSCRIBE can be quickly converted from temperature recording to time-operation recording simply by changing the door of the instrument. A widely-used combination comprises one clock case (having a 24-hour spring-wound movement) and two doors (one with a bi-metallic temperature element, and one with mechanism for recording motor on-and-off time). This economical set costs very much less than a dual recorder. Even two complete TEMPSCRIBES, to obtain simultaneous records of temperature and motor operation, cost no more than you would normally expect to pay for a single instrument that makes dual records, yet give you all the advantages of two separate instruments! Bul. 704 gives list of ranges, practical application data, and complete details.

Ask Your Wholesaler, or Orders Filled Direct.
BACHARACH Industrial Instrument Co.
7000 BENNETT STREET • PITTSBURGH 8, PA.

Display, Selling Techniques Geared to Million-Unit Market Can Help Dept. Stores Get Larger Share of Range Sales

NEW YORK CITY—"The electric range market appears to be about 900,000 to 1,000,000 units for 1947 and 1,670,000 per year thereafter, which implies production of 33,000 units per week," John F. McBride, sales manager of the range division of the General Electric Co. predicted at the National Retail Dry Goods Association convention here recently. "Translated into retail dollars, we have a \$250,000,000 business in prospect," he added.

"On water heaters, we can see an average of 450,000 heaters per year as quickly as they can be built with increases to 600,000 by 1950," he said. He pointed out that in the past, "department stores of all types have never taken more than 5% of the electric range market."

However, Mr. McBride declared, now was the time for the department stores to "secure a more satisfactory portion of the range business."

He asserted that many electric utilities are anxious for private merchants to take over the job of selling electric ranges. "Many have withdrawn from active selling entirely and have become promoters only, leaving selling to you," he said.

He outlined the four basic in-

redients to getting established in the range business as:

1. Advertising (securing traffic).
2. The merchandise presentation (display).
3. The demonstration (sales presentation).
4. The follow through (installation and service).

Mr. McBride recommended advertising electric ranges now to influence those prospects who may not buy for another year or so in favor of the advertiser's store.

The merchandise presentation

Aluminum Export Controlled To Aid Veteran Housing

WASHINGTON, D. C.—Aluminum sheets, plates, and strips have been placed under export control, effective Jan. 22, in order to conserve available supplies to meet the demands of the Veterans' Emergency Housing Program. The action was taken at the request of the National Housing Expediter who said large quantities of these commodities will be needed for veterans' homes this year.

should be designed to save the customer steps and to make related selling easy, he asserted. When putting the range in a featured spot, display it with an idea, such as more leisure time, or cooler working conditions. Also play up hidden values.

"The day is past when a range can be put in a window with a side card and a price tag thinking that this will sell," Mr. McBride stated.

The sales presentation requires salesmen who know how to sell and who know their product intimately. Such men cannot be trained over night, he warned.

Once the sale has been made, the range must be installed and the customer must be given a home demonstration.

"If she is adequately instructed by this home demonstration, a satisfied customer will almost always become a prime source of new prospects for the salesman."

He pointed out that in some cities the electrical utility will assume the cost of installation and in some cases will make the installation itself.

However, if the department store is not located in such a city, definite arrangements with an installer must be made, he said.

Promotion Sale Moves 267 Boxes In Month

TERRE HAUTE, Ind.—The Root Store and its eight Wabash Valley branch stores at Brazil, Sullivan, Princeton, Clinton, Franklin, and Greencastle, Ind.; and Casey and Robinson, Ill., promoted a sale of 267 Cromwell electric refrigerators in December and had little trouble disposing of them. Majority of purchases were cash.

The sale of refrigerators started at noon Monday when the stores opened and customers were waiting. W. C. Cole, Terre Haute Root Store appliance manager and district branch store supervisor said.

A MASTERPIECE in Thirst-quenching Convenience

OASIS
ELECTRIC WATER COOLER

You're always Sure with an Oasis-built by Esco, pioneers in the electric water cooler field.

The EBCO Mfg. Co.
401 W. Town St.
Columbus 8, Ohio



IT'S EXCLUSIVE! DUAL-TEMP* IS REALLY

*Trade Mark Registered

2 REFRIGERATORS in 1!



Dual-Temp by Admiral is *really* two separate refrigerators housed in one beautiful cabinet, each serving a particular refrigeration need, each with temperature controlled entirely independently from the other.

Refrigerator No. 1, above, is the built-in home freezer with temperature as low as 15° below zero; refrigerator No. 2, below, is the purified moist-cold compartment with temperature at an average of 38°.

So efficiently are these two compartments insulated from each other, they perform as though they were miles apart, yet one power unit serves both. It's a Dual-Temp exclusive!

MORE DUAL-TEMP EXCLUSIVES

1. TWO TEMPERATURE CONTROLS

Each of Dual-Temp's two refrigerators has its own cooling system and its own individual temperature control. Temperature in either compartment can be varied independently. No other refrigerator can do that!

2. NO DEFROSTING

Dual-Temp's huge, purified, moist-cold compartment never has to be defrosted. Completely insulated from the freezing locker, temperature never goes below freezing. No freezing means no defrosting.

3. NO COVERED DISHES

With 85% humidity maintained throughout, foods can be placed anywhere in the moist-cold compartment and kept fresh for weeks without covering.

4. STERILAMP PROTECTION

Acts like sunshine to retard mold growth, reduce spoilage due to bacteria, and combat offensive odors.

Admiral

CAN BUILD A DUAL-TEMP REFRIGERATOR

ADMIRAL CORPORATION, CHICAGO 47 • DUAL-TEMP REFRIGERATORS • HOME FREEZERS • ELECTRIC RANGES • RADIOS

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

Footnote: A few years ago, Miss Nolan and the aforementioned Walter Daily decided that it was time they got some fun out of life together. So they married. And now Walter has persuaded her to retire from an active business career.

Can you imagine a luckier, happier fellow? The lady who probably knows more about scientific cooking and home-making than anyone on earth—and she's a glamour-gal, to boot—is now devoting all her waking moments to the job of keeping one man happy and contented.

Wotta life Brother Daily has set up for himself!

There's no accounting of luck in this world.

Wanna Buy a Town?

Dragerton, Utah, population 2,500, is for sale.

A tailor-made town, far from big city noises and complete with more than 600 dwellings, a general store, theater, church, hospital, post office, school, one passenger sedan, one electric clock, unused laundry equipment, lawnmowers, refrigerators, and other inducements for pleasant living, Dragerton is surplus property of the U. S. Government and is offered for sale in its entirety only, on a sealed bid basis with credit terms permitted.

The self-sufficient settlement is in Carbon County, 23 miles east of the City of Price, hard by Desolation Canyon. Its development in 1943 cost the government more than \$4,530,000.

Occupying 377 acres, formerly used for pasture and farming, the townsite's primary purpose was the wartime housing of employees of the Geneva Coal Mine. Most of its present population of approximately 2,500 are coal miners. They occupy Dragerton's 604 four, five, and six room dwellings of one-story frame construction containing two and three bedrooms.

Since the peacetime production program of the giant Geneva steel plant necessitates continued operation of the coal mines, it is likely additional housing units will be constructed.

WAA is quick to caution, however, that Dragerton is too far removed from any other industrial area or population center to merit its being considered as possible of utilization for general housing. Its current transportation attractions are a branch line of the Denver and Rio Grande Railroad which runs within 25 ft. of the town and a Utah state highway which skirts it.

All of Dragerton's family dwellings have insulated floors, walls, and ceilings, and asphalt shingle roofs and shingle or redwood sidings. The appurtenances allocated to the dwellings—all of which must be included in the purchase of the town—include 450 new 7-cu. ft. Frigidaires, 50 used 6-cu. ft. Gibson refrigerators, 725 coal ranges, 705 heating stoves, 20 furnaces for basement houses and living room, dinette and bedroom furniture, rugs, draperies, and linens.

Prospective owners of the town must also buy a guest house, adaptable for use as a hotel, with six sets of bedroom furnishings, linens, rugs, and an oil furnace; office equipment, including desks, chairs, filing cabi-

nets, typewriters, adding machines, etc.

Compulsory also to would-be owners is the purchase of Dragerton's laundry equipment such as washers, presses, tubs, compressors, ironing boards, cookers, extractors, darning machines, ironers, scales, marking machinery—all of which was purchased originally for a proposed town laundry but some of which is now in storage at the townsite and some stored with the manufacturer.

Likewise with Dragerton must be purchased the town's hospital, complete with operating room equipment, instruments, X-ray machine, delivery room equipment, nursery, 16 beds, linens, kitchen equipment and expendable supplies essential for initial opening of a hospital.

The sale would include a variety of other Dragerton assets. These are a school (with one electric clock) and a gymnasium, a theater with 600 seats and a candy display case, a church, a general store (with complete electrical meat department equipment), clinic, post office, dormitory, playground with equipment, a road scraper, five dump trucks, a passenger sedan, miscellaneous tools and lawnmowers.

Property improvements installed by the government include gravel streets and sidewalks in the residential area and 9,000 yards of asphalt paving in the business section. There is a 500,000-gallon concrete water reservoir with pumping equipment, chlorination and ammonia treatment plant and a cast iron pipe distribution system, as well as a modern sewage disposal plant and system.

Power and light are furnished from lines installed and owned by the Utah Power & Light Co.

Sealed proposals for the purchase of Dragerton as a complete town should be forwarded to the WAA regional office, 1710 South Redwood Road, Salt Lake City, Utah. All bids must be received prior to 2 p.m. (MST), Feb. 14, 1947, at which time they will be opened and read publicly. Credit terms may be arranged for the purchase. The WAA reserves the right to reject any and all proposals submitted.

They're On the Right Track

A new experiment, aimed at furthering America's nonpareil free enterprise system, now is being tried

out on the airwaves. Stressing the importance of production as a means toward higher living standards, an extraordinarily worthy half-hour radio program is sponsored by the Herman Nelson Corp. of Moline, Ill., manufacturer of heating, ventilating, and air conditioning equipment.

On its "Tell-a-Story" program, this 39-year-old corporation aims to illustrate to the public, and chiefly to young citizens, the basic fundamentals of the free enterprise system.

Its broadcast begins and ends with a short "commercial"—something like the following: "The more we produce, the better we will live. The things we have depend not on money, but on production."

After this introductory statement, a story-with-a-moral is told by Helen Day, Nelson's program director. These tales are slanted toward the free enterprise theme. Following the story-telling period come informal interviews with youthful members of the studio audience, related to such popular subjects as hobbies, sports, school, etc.

"Tell-a-Story," the Nelson organization's first radio advertising program, is prepared by the L. W. Ramsey Advertising Agency of Davenport, Iowa. The same agency recently concluded for the Nelson company a year-long series of newspaper advertisements featuring answers to the question: "Where does all the money come from?" This remarkable campaign emphasized the interdependence of workers, manufacturers, and the community in the overall economic picture of Our Nation.

"Year-in, year-out advertising effort is the only kind of promotion which has a chance of success in the public relations field," claims Mr. Nelson, the sponsor.

PINOCCHIO FREEZERS

Pinocchio Lock and Hinge models in 10-15-20-30 and 40 cubic foot capacities, also glass tops in 15-20 and 30 Cu. Ft. Self-Contained and Remote—with and without Canopies. Immediate Delivery—Write for Prices.

Glass Top Model—

Complete Refrigerator Supply

92 - 7th Ave., New York 11, N. Y.



WOLVERINE TRUFIN gives

High Performance



... as it keeps passengers comfortably cool in Douglas airplanes

The new Douglas DC-4s, as a result of successful tests, will be equipped with cooling units which will keep temperatures in cabin interiors down to a comfortable degree in hot weather. Wolverine Trufin forms an essential part of this recent development.

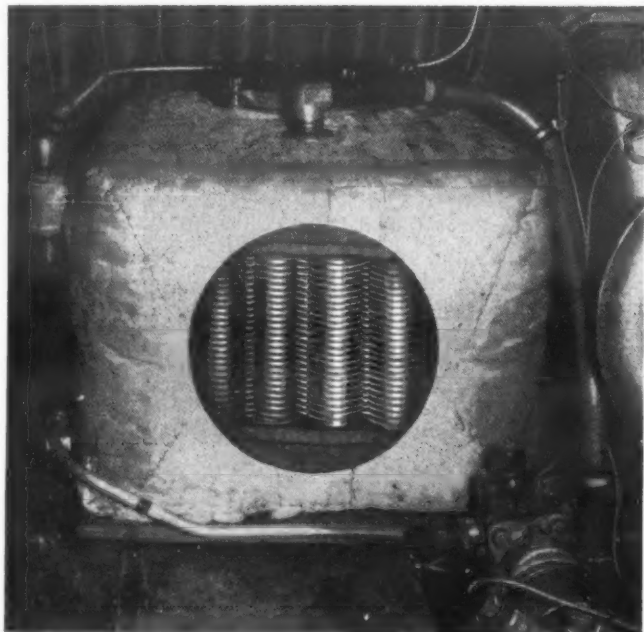
Trufin all-one-piece, aluminum finned tube is ideal for aircraft use in heat exchangers. The heat transfer coefficient is high, thereby reducing the required surface area and ultimately saving volume and weight. Because the fins are integral with the tube itself, Trufin resists vibrations and retains its efficiency.

This illustrates another application of Wolverine Trufin, again demonstrating the high performance values this unique tube delivers in compact space.

WOLVERINE
TUBE DIVISION

CALUMET & HECLA CONSOLIDATED COPPER COMPANY

1411 CENTRAL AVENUE • DETROIT 9, MICHIGAN



Air is sucked into the airplane by a fan and routed through the cooler flowing around the outside of the finned tubing, and then dispersed in the main cabin. In this application, Wolverine Trufin contains a mixture of alcohol and carbon dioxide at a temperature of approximately 100° F below the freezing point of water. This mixture is obtained by dropping dry ice into the tank containing methyl alcohol, and is pumped through the cooler as a liquid. This cooling system appreciably lowers the temperature of the cabin for the passengers' comfort during hot weather.

The cooler has 84 individual pieces of Trufin, each 4 inches long. Two coolers are used in the cooling system.

AVAILABLE FOR DELIVERY:

$\frac{1}{3}$ - $\frac{1}{2}$ - $\frac{3}{4}$ Condensing Units
Priced Right on
Large Quantity Sales

Manbrook Refrigerator Co., Inc.
265 Greene Ave. Brooklyn 5, N. Y.

ALL NEEDED CONTROLS

FOUND IN THE CUTLER-HAMMER REFRIGERATION REPLACEMENT LINE

Sixty percent of all refrigeration control replacement requirements are met by one Cutler-Hammer control alone ... the Universal Replacement Unit. And where specific control is needed, that need is met by Exact Replacement control items in the C-H line, each individually packed, clearly labelled, complete with dial plate mounting screws, trim washers and full instructions for mounting and adjustment.

The practical advantages gained are: less capital tied up in stock; rapid and regular turnover; speedier completion of each job; greater all-round satisfaction. And in each C-H Replacement unit you will find the results of a 50-year specialization that had led to acknowledged leadership in the control field. Thus, outstanding refrigeration wholesalers recommend C-H Replacement Control and alert service organizations everywhere feature and use it. CUTLER-HAMMER, Inc., 1362 St. Paul Ave., Milwaukee 1, Wisconsin.

Bul. 9521N9

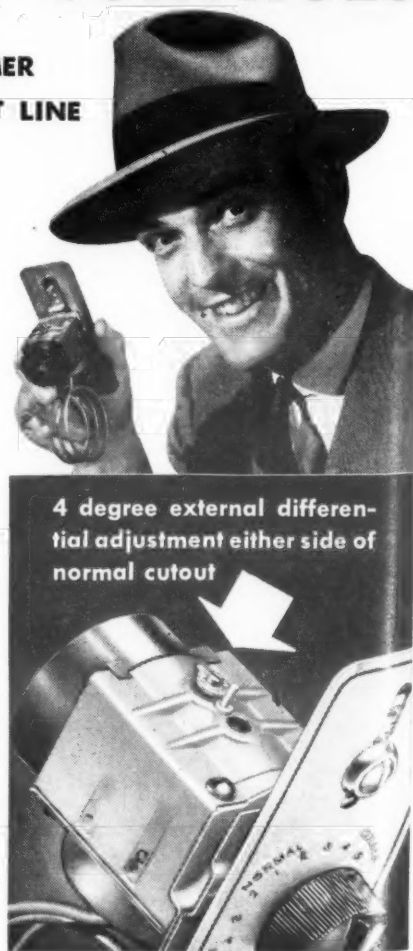
THIS ONE UNIVERSAL UNIT ALONE COVERS 60% OF ALL NEEDS
ADJUSTABLE MOUNTING BRACKETS
Maximum Mounting Centers . . . 4-3/16
Minimum Mounting Centers . . . 2-3/16

Adjustable Cutout Feature—Differential can be increased 4 degrees by turning indicator in "Hi" direction and decreased 4 degrees by turning in "Lo" direction.

Adjustable Range—Turning screw clockwise lowers setting and counter-clockwise raises settings.

Operating knob can be adjusted to meet various evaporator scale settings. New knob

DOMESTIC, SEMI-COMMERCIAL AND COMMERCIAL CONTROL

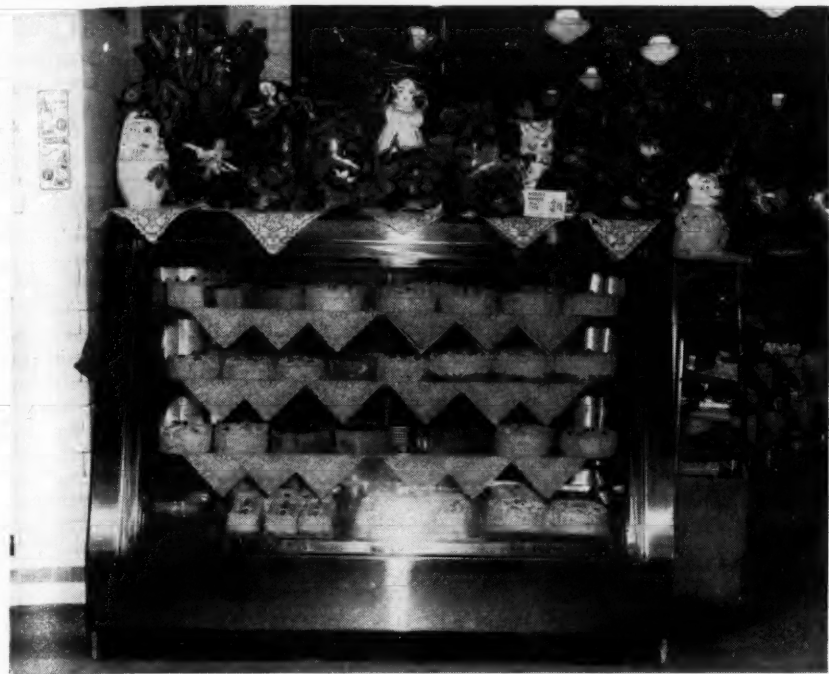


4 degree external differential adjustment either side of normal cutout

is ideal for varying shield thicknesses. Makes this control adaptable to wider range of single dial replacement jobs where overload is not required in unit.

CUTLER-HAMMER
MOTOR CONTROL
C-H

150 Whipped Cream Cake Sales Daily Attributed to Custom-Built Case



Hillman Bakery believes the custom-built refrigerated display case above is chiefly responsible for the large volume of sales of whipped cream cakes. Before installation the whipped cream cake was a rarity, now it is a major profit item, according to Miss Della Doroh, bakery manager.

CHICAGO—A volume of from 120 to 150 whipped cream cakes per day, and more than 200 on Saturday, is sold by the Hillman Bakery, Washington and Clark, here, through use of a custom-built display refrigerator which was installed in October for the purpose.

"The market for whipped cream cakes is much larger than we had anticipated," Miss Della Doroh, bakery manager, indicated. "They are popular not only for parties and Saturday evening entertaining, but seem to have caught on as an unusual dessert item any day in the week. The amount of repeat sales to the same customers has been constantly surprising."

Before the specially designed display refrigerator was installed, whipped cream cakes were a rarity in this Chicago bakery. Now, they have become a major profit item. Cakes sold include three-layer pineapple cake, strawberry shortcake (always a popular leader), angel food cake in

several sizes, devil's food, and sunshine cake, all developed into "demand" items with the whipped cream covering.

Prices cover a wide range, from small angel food types at 61 and 79 cents to strawberry shortcake at \$1.35. Three layer devil's food cakes are 89 cents and \$1.25, and sunshine cakes from 79 cents to \$1.

Most of the actual merchandising job is done by the stainless steel refrigerator itself, according to Miss Doroh. This eye-appealing case is 6 ft. long, 5 ft. high, with a slanting double-glass front which gives a clear view of four banks of pure white cakes.

Stainless steel inside and out, the refrigerator shows its contents on four stainless steel rod shelves, with space for from forty to fifty cakes depending upon their size. For "selling appeal" the cakes are sparked up with maraschino cherry and pistachio trim, and are shown under clear daylight fluorescent light.

Cakes are baked on an upper floor of the building, kept on tap against sales in the downstairs bakery, and are coated with whipped cream only when there is space for them in the refrigerator. Two stainless doors at the rear are used for stocking the unit, the cakes rushed directly from the bakery icing department.

A blast unit utilizing a 1-hp. compressor circulates air chilled below 30° temperature through the case, 400 cu. ft. per min., to maintain temperatures between 20° and 30° in the refrigerator. Baffles keep the flow of air a gentle movement, to prevent damaging delicate traceries and designs in the whipped cream. Cakes are kept in perfect condition for days if necessary, but turnover is such that few are in the case more than four hours.

One of the most difficult problems has been packaging the whipped cream cakes to carry them safely through crowds in the Hillman store. Miss Doroh has solved this through use of double-weight white cardboard cartons, and sheet wax paper.

One sheet is used on the bottom of the box, two on the sides, and four more rolled up into a ball in the corners, to prevent the cake from sliding in the box. This light pressure, plus the refrigeration which keeps the delicate whipped cream stiff for some time, makes it possible for customers to carry the cakes home undamaged.

Sales volume indicates that the expensive custom built refrigerator will pay itself off rapidly, according to Miss Doroh. Since the first week when whipped cream cakes were introduced, the refrigerator has operated at capacity. "We could sell many more if we had space," it was stated.

REMA Cites Vast Field Served By Refrigeration

CHICAGO—Whether the mercury stands at 70 to 80° F. in an air conditioned room, a -150° F. in a laboratory cold room, or back up to an even 0° F. in a frozen food storage cabinet, the job of lowering the temperature has been accomplished by postwar mechanical refrigeration.

In a recent survey of the services now performed by mechanical refrigeration and air conditioning, the Refrigeration Equipment Manufacturers Association listed more than 200 uses, ranging from air conditioning for human comfort in the above-zero brackets, to the 65° F. to -36° F. span used in various food preservation and processing, on down to the sub-zero temperatures of -90° to -150° F. used in the cold-treating of metals and in research work.

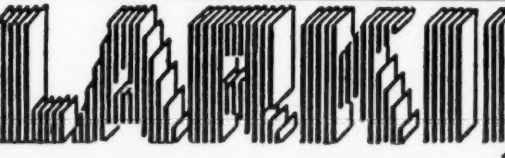
Typical uses in the entire 230° range are shown in a new "all-industry" thermometer prepared by

REMA with the cooperation of refrigeration and air conditioning engineers. Equipment to perform the multiplicity of tasks shown now is in production in hundreds of factories throughout the country.

3½ Tons Frozen Pheasant Flown from South Dakota In 1946 Hunting Season

CHEYENNE, Wyo.—Western Air Lines officials here reported that nearly three and one-half tons of dressed and frozen pheasants were air freighted out of South Dakota via WAL during the 1946 hunting season which closed in December.

During the first part of the hunting season, WAL's four flights a day through the pheasant country carried as high as 300 lbs. of pheasants per plane, the meat being destined for sportsmen's tables all over the country and a large portion consigned to Southern California.




Refrigeration Products

Humid-Temp Forced Convection Units—Patented
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Steel Plate Coils—Disseminator Fans—Heat
Exchangers—Evaporative Condensers—Instan-
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REFRIGERATION**

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Watchdog
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Nation's Food
Supply



Magnet cures headache



Emilia Bojanowski
J & H Associate,
Plant No. 3

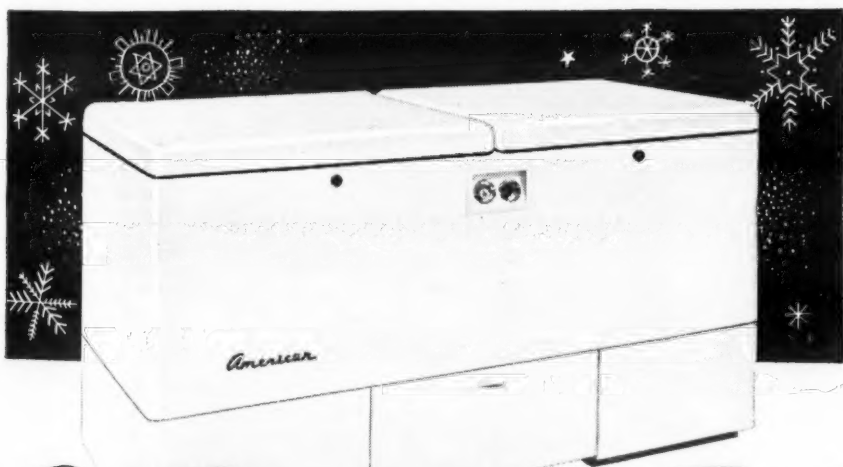
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Labor-Saving Equipment Can Lower Costs Of Frozen Food Processing, Tressler Says

CLEVELAND—If a locker plant operator equips his plant with labor saving fruit and vegetable preparation equipment, he can handle vegetables and fruits at a price the housewife can afford to pay.

That opinion was expressed by Dr. Donald K. Tressler, noted authority on frozen foods, in a speech before the National Frozen Food Locker Association here recently.

Dr. Tressler outlined for the assembled locker operators the equipment necessary and desirable in a preparation room and gave specific instructions on the preparation of typical vegetables and fruits.

"In planning a fruit and vegetable preparation room," Dr. Tressler declared, "it is well to remember that one should be able to handle a large variety of vegetables and a number of fruits.

"Consequently, there should be only a few fixed pieces of equipment. The blanching equipment, sinks, and the wall tables and cabinets may be permanently installed. All other equipment should be portable so that it can be put in place when needed and later moved out when not in use.

"Preferably the room should be adjacent to a driveway so that the vegetables can be unloaded directly from trucks. The room should be close to a walk-in cooler where vegetables and fruits may be stored while awaiting processing.

"Again it is best to have the processing room adjacent to the

sharp freezer so that it will be unnecessary to move the packaged products for any considerable distance.

"An ample supply of running cold water of good quality (portable) is essential. All locker plants where any considerable quantity of vegetables are handled should have a good steam supply, piped to the processing room.

"Since in both water-blanching and steam-blanching, much steam escapes, good forced draft ventilation, preferably an exhaust fan, should be provided.

Good Drainage Needed

"The washing, blanching, and cooling operations all involve the use of large quantities of water and consequently are sloppy. For this reason the floors should be of concrete and well drained.

"All vegetables are washed, blanched, and cooled. Therefore, equipment for effectively carrying out these operations should be given first consideration.

"If considerable quantities of vegetables are to be handled, both a steam blancher and a water blancher should be provided. If an ample supply of steam is provided from a boiler or generator, steam blanching will be found to be more satisfactory than water blanching.

"Further, a good steam blancher will handle a large quantity of vege-

tables with less labor than is possible in any but the larger continuous water blanchers. Therefore, if only one blancher is to be provided, a steam blancher is recommended."

Dr. Tressler listed the following as essential and desirable equipment for the preparation room in the locker plant.

Essential equipment:

Large double stone or enameled iron sink
Kitchen stove (for use when steam from boiler is not available)
Two tables
One platform scales (4 oz. to 200 lbs.)

One scales (1 oz. to 25 lbs.)
Several large heavy aluminum or stainless steel pans ranging in size up to 10 gal., suitable for use in blanching, etc.

Two or more large heavily tinned wire baskets to fit blanching kettles
Two large colanders
Aluminum, pint, quart, and gallon measures

Covered pitcher for syrup
Large mixing bowls
Large enameled spoons
Several scoops of various sizes
Rectangular funnel and funnel stand for filling packages
Garbage cans
Dish towel

Large assortment of packaging materials suitable for fruits and vegetables

Electric iron or sealing device for heat sealing packages

Desirable equipment:

Pea and lima bean sheller
Steam blancher and trays
Steam jacketed kettle of 10 or 20 gal. capacity for blanching
Heavily tinned wire basket to fit steam kettle

Strawberry slicer
Cherry pitter
Bean snipper
Bean cutter
Bean frencher
Corn cutter
Corn husker
Apple parer and corer
Peach slicer

Cutting box for asparagus
Two half barrels
Two portable racks with trays for packages of prepared vegetables.

Dr. Tressler estimated the minimum cost of the essential equipment at \$1,000 to \$1,200, and the desirable equipment at \$5,000 to \$8,000.

To describe the preparation of vegetables, Dr. Tressler selected peas as typical and as a vegetable that the locker operator can handle more simply than the housewife.

"The first operation is the podding or hulling of the peas," Dr. Tressler said. "If this is done by hand, it will take one person at least two hours to shell a bushel of peas.

"Rotary podders are available in two sizes; the smaller one pods 6 bushels, the larger one 17 bushels per hour.

Wash Half Bushel at a Time

"The shelled peas are washed, preferably in running cold water. This can be done a half bushel at a time in a 10 gal. stock pot. The washed peas should be inspected to eliminate any foreign matter (pieces of pod).

"If an inspection belt is available, one person can spread the peas on the belt while one or two others watch them as they pass along the belt and pick out any foreign matter.

"The peas are then blanched. If a steam blancher is available, the peas are spread out on a perforated metal or woven wire tray to a depth of about an inch.

"The trays of peas are placed in the blancher, the steam valves opened, and after the air has been forced out, the vent is nearly closed, and the steam valves partially closed. Blanching time (90 seconds) should be counted from the moment the air has escaped and the vent is closed.

"Immediately after blanching, the hot peas are dumped into cold running water, where the peas are chilled for three minutes or until they

reach the temperature of the cooling water. The peas are then drained and packaged in moisture-vapor proof packages holding not more than one quart of peas. The packages of peas are closed, placed on trays on portable racks, and immediately put in the freezer.

"Packages of peas and other similar vegetables which have some interstices between the vegetables, or pieces of vegetables, may be completely filled. But head space must be left in packages of spinach, other greens, cooked squash, and other vegetables which pack solidly, without air spaces.

Fruits Require More Handling

"As a rule, the preparation of fruits for freezing requires considerable hand work since relatively little labor saving equipment is available which is suitable for the handling of the relatively small quantities of fruit received at the locker plant.

"Ordinarily fruits are not pre-cooked, since this gives the product cooked flavors—flavors resembling canned fruit. Therefore, it is necessary to retard enzyme actions and oxidation by the use of syrup or sugar.

"In the early days of the industry, dry sugar was almost exclusively used on fruits to be frozen. This was effective in preventing discoloration and loss of flavor from juicy fruits, especially berries.

"However, it was not satisfactory on relatively dry fruits such as peaches, apricots, and prune plums which discolor because of oxidation before the sugar draws enough juice from the cut fruit to cover it and shut off air from intimate contact with the pieces of fruit.

"Syrup was found to be much more effective than dry sugar in preventing browning of these fruits. At first the only syrup suitable for the purpose was that made from granulated sugar, since ordinary corn syrup contains too much

(Concluded on next page)

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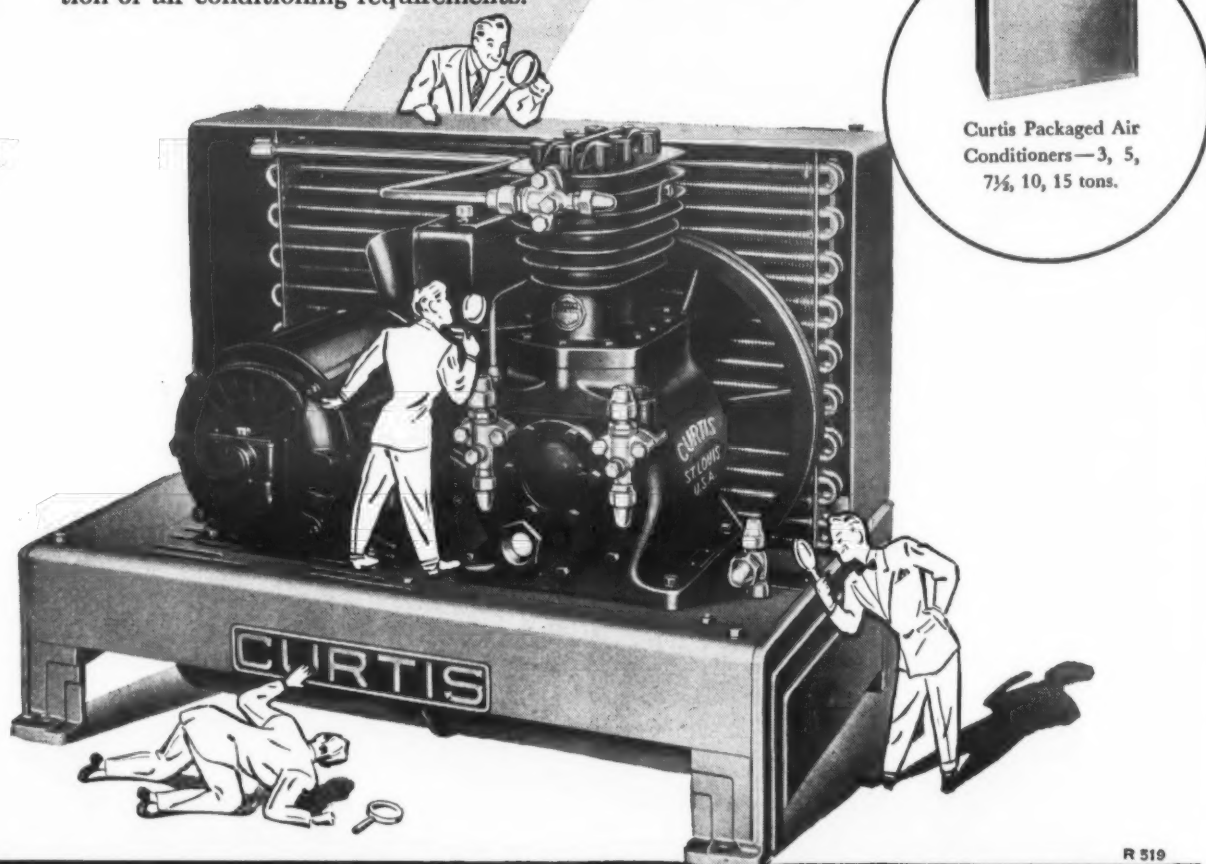
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Preparing Peaches for Freezing Takes Less Labor at Locker Plant Than at Home

(Concluded from preceding page)
dextrin and is not sufficiently sweet. "In 1938, when the new enzyme-converted corn syrup, Sweetose, became available, I was very much pleased to find that it is even more effective in retarding browning (oxidation) of cut fruit than is cane sugar syrup."

"The use of Sweetose white syrup on fruit to be frozen has another advantage in that the drained weight of the thawed product is slightly greater than when granulated sugar syrups are used, and the fruit is somewhat more pleasing in appearance because of the slightly higher gloss."

"Although Sweetose white syrup is almost twice as sweet as ordinary acid-converted corn syrup, still it is not as sweet as cane sugar syrups of equal concentration."

Dr. Tressler selected raspberries and peaches for his detailed description of the preparation process.

"Raspberries are very soft and crush easily," he said. "Therefore they must be handled in small containers, a few at a time. They should be brought to the locker plant in pint or quart chipboard baskets and either immediately prepared for freezing or placed in a cooler held at about 32° F."

"The berries are carefully emptied into ice water (water with ice in it) and quickly washed with as little agitation as possible. As the berries are removed from the ice water, any stems, caps, or other foreign matter should be picked out and eliminated. After draining a few moments, the berries should be put into moisture proof liquid tight containers of either the pint or quart size, filling the containers about four-fifths full."

"Prepare a syrup by mixing 1½ cups of cold water with the contents of one 5 lb. jar of Sweetose white syrup. Add ¾ cup of this diluted Sweetose syrup to each pint package of berries, or 1½ cups of the syrup to each quart package. Close the packages, heat sealing if necessary. Put on the tray and transfer to the freezer without delay."

"Peaches can be prepared for freezing with less labor in the locker plant than in the home kitchen. Upon arrival at the locker plant, the fruit should be sorted as to maturity."

"The soft ripe peaches should be immediately prepared for freezing. Hard fruit should be put aside until it ripens, for it turns bitter if frozen when hard."

"The soft ripe peaches should be placed in a wire basket and then immersed in boiling water for 60 to 90 seconds. Immediately upon removal from the boiling water bath, the basket of peaches should be dropped into cold running water."

"The combination heating and cooling of the peaches loosens the

skins so that they can be pulled off very easily. After this is done, the peaches should be immersed in 1% citric acid solution, merely to keep them from browning while they are being sliced or halved."

"The peaches may then be cut in halves, the pits removed, and discarded, and the halves placed in moisture proof liquid tight cartons."

"The cartons should be filled four fifths full, then a cup of diluted Sweetose white syrup prepared as for raspberries is added to each pint carton to cover the fruit. The cartons are then closed."

"In case the quart cartons are used, one pint of the prepared Sweetose syrup is placed in each carton."

"If sliced peaches are preferred, the peeled peaches are sliced directly into the cartons. In this case ¾ cup of the prepared syrup is used on each

pint, and 1½ cups of the syrup on each quart carton of sliced peaches."

Dr. Tressler recommended that nectarines, plums, and apricots be treated the same as peaches, and that dewberries, loganberries, youngberries, boysenberries, blackberries, blueberries, and huckleberries be prepared the same as the raspberries."

For strawberries, he urged use of granulated sugar instead of Sweetose."

Friez Instrument Assumes Plant Ownership from RFC

BALTIMORE—First in this area to exercise a lease-option arrangement with the Reconstruction Finance Corp., the Friez Instrument Division, Bendix Aviation Corp., has assumed full ownership of its Towson, Md., plant and facilities.

The organization is a leading manufacturer of meteorological instruments in this country and prior to the war had entered the heating controls field. Its program for a resumption of the manufacture of heating and air conditioning controls is almost completed.

Miami, Mexico City Firms Elected to REWA To Expand Facilities 50%

CINCINNATI — Election of two new members, one in Miami, Fla., and the other in Mexico City, Mexico, to the Refrigeration Equipment Wholesalers Association has been announced by H. S. McCloud, executive secretary of the association.

The Graves Refrigeration Co. of Miami is the third Graves organization to gain REWA membership. R. M. Graves, vice president and secretary of the Miami firm is also president of Graves Refrigeration Supply of Atlanta, and associated with Graves Bros. of Tampa, Fla. John C. Graves is president and association representative of the Miami establishment.

The addition of Refrigeracion Y Productos Industriales, S.A. brings the organization's foreign members to four.

REWA now claims 155 members in the United States, five in Canada, and four elsewhere.

BUFFALO—Presaging the expansion of production facilities here by about 50%, Fedders-Quigan Corp. plans soon to add some 400 workers to its plant.

A statement by Edmund R. Walker, vice president, follows:

"The corporation is in the process of expanding its Buffalo manufacturing operations by more than 50%. A new feeder plant at 282 Court St. is being brought into volume production of domestic and commercial refrigeration component parts. Employment at Buffalo will be increased by another 400 workers."

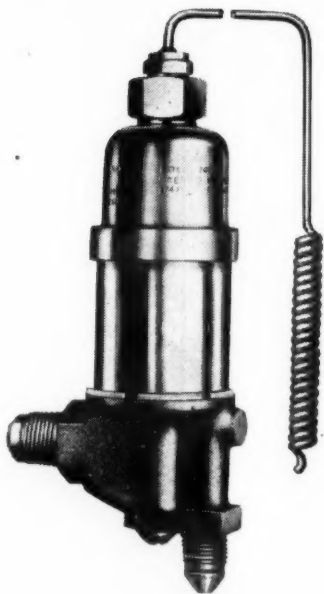
Currently employing slightly more than 1100 workers, the Buffalo plant's force stood at 800 before World War II.

Rich's Names Manley Buyer

ATLANTA—Rich's, Inc., here has appointed Verne P. Manley as buyer of radios and records.

You Are Sure of Good Control if you Specify "DETROIT"

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"Detroit" No. 673 has a long record of dependable performance in a wide variety of installations, and has been, for many years, "the standard of the refrigeration industry." Designed for average size commercial and air conditioning installations. Sensitive and accurate in operation—gas charged for instant response and reduction of motor load during pull-down cycle. Duraflex and Delubaloy needles and seats resist corrosion and assure long life.

UNIT NUMBERS OF No. 673 VALVE

Use "Detroit" Unit Numbers when ordering these stock items from your "Detroit" Wholesaler.

Unit No.	Refrigerant	Max. Pressure	Connections
6731968	Freon-12	15	Inlet: 3/8" SAE for 3/8" x 1/4" Reducing Nut. Outlet: 1/2" SAE
6731428	Freon-12	55	
6731563	Methyl	10	
6731411	Methyl	40	

Rated at 1-ton Freon-12 or 2-ton Methyl.

NO. 573—THE SAME SUPERIOR PERFORMANCE AS THE NO. 673 FOR SMALLER INSTALLATIONS

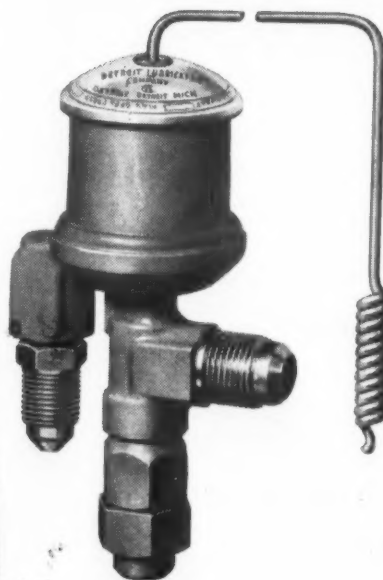
This valve, in 1/2-ton (Freon-12) capacity, has the quality and operating characteristics of No. 673. Designed for small commercial installations, its double diaphragm construction with gas charged power element permits close super-heat control at low suction pressures and provides motor overload protection in its simplest, most effective form, using only one power element.

UNIT NUMBERS OF No. 573 VALVE

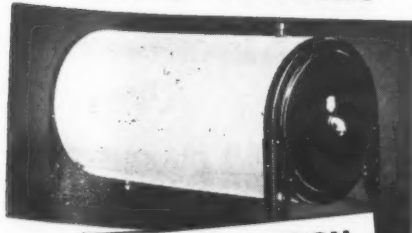
Use "Detroit" Unit Numbers when ordering these stock items from your "Detroit" Wholesaler.

Unit No.	Refrigerant	Max. Pressure	Connections
57300	Freon-12	45	Inlet: 3/8" SAE for 3/8" x 1/4" Reducing Nut. Outlet: 1/2" SAE for 1/2" x 3/8" Reducing Nut.
57309	Freon-12	10	
57311	Methyl	35	
57315	Methyl	5	

Rated at 1/2-ton Freon-12 or .9-ton Methyl.



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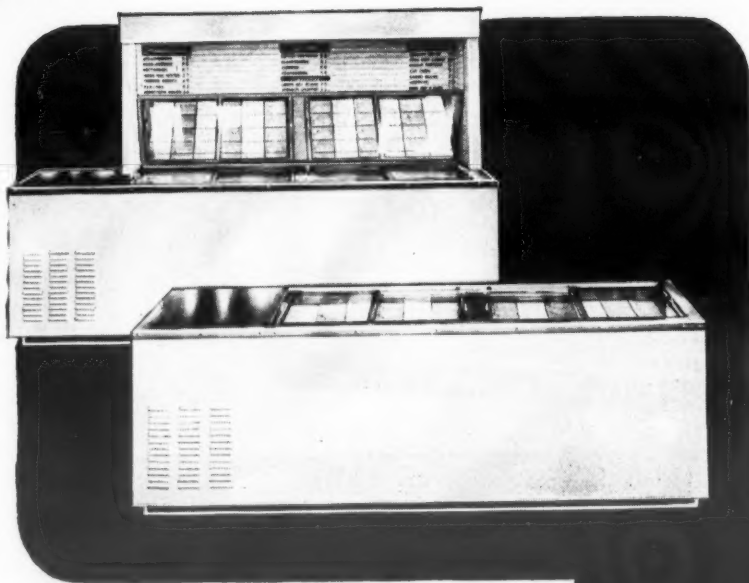
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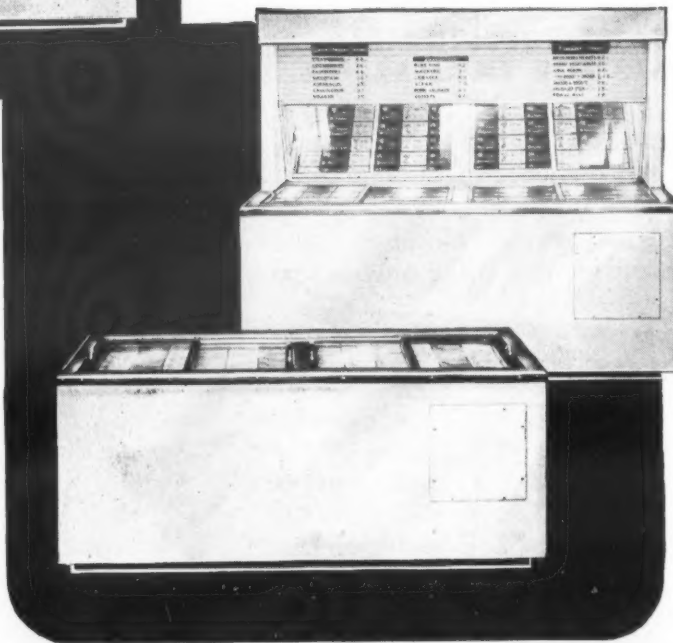
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VOLUME 50, No. 5, SERIAL No. 933, FEBRUARY 3, 1947

Building Boom In 1947 Seems Sure; Should Bolster Appliance Business

THE biggest year in the nation's history is predicted in the Architectural Forum's 1947 Building Forecast. Based on a study of the opinions of top-flight U. S. economists and building leaders, this forecast predicts that total construction expenditures for this year will reach an incredible 20 billion dollar peak. That would be an increase of 26% over 1946.

Even measured in uninflated 1939 building dollars (which are worth only about 67 cents each today) this projection amounts to approximately 13.5 billion dollars, or 30% more than the 1939 total.

Approximately 1,200,000 new dwelling units will get under way in 1947, topping the 1,000,000 started in 1946, according to the Forum.

Material shortages, building's most hampering 1946 problem, are rapidly easing. Production of the four most important materials—lumber, cement, brick, and asphalt roofing—has climbed well above 1939 averages. In fact, unless work stoppages intervene, there even may be an over-supply of some materials.

Postponement of scheduled building is seen, however, if building costs continue to rise. Such curtailment would probably appear first in industrial classifications, where projects are big and closely related to long-term economic patterns.

Chief cost control valves are wholesale material prices and site labor costs. Already, combined increases in these components have pushed costs on a typical six-room house up 52% since 1939.

Wholesale material prices, which are up at least 50%, are expected to rise perhaps 10%, and then drop back the same amount in 1947.

The supply of building labor, no great problem in 1946, is feared as a potential 1947 bottleneck by industry observers. If this fear is realized, site labor costs will increase.

Government and labor leaders, however, feel that the market will be relatively stable, with the supply of new or untapped labor sufficient to handle building's boom year.

New construction will account for approximately \$13.1 billion of the \$20.2 billion total, with a whopping \$6.9 billion scheduled for maintenance and repair expenditures. Private funds will account for 80% of the new construction total, with housing getting the lion's share.

Public construction is expected to advance 27% over the 1946 total to a \$2.7 billion volume.

Of the \$10.6 billion slated for private construction, residential building will account for \$5.1 billion, approximately double 1946 expenditures. Private non-residential activity will amount to \$3.9 billion, up 14% over 1946. Industrial building will account for about half of this figure. At the end of the private scale come farms and privately owned utilities, which are ready to spend \$410 million and \$1.2 billion, respectively.

Geographically the building spotlight will continue to focus on the West Coast. Los Angeles, which led all cities last year, will probably continue in that position, with New York City, Detroit, Chicago, Philadelphia, Houston, San Francisco, Baltimore, Dallas and Seattle following in that order.

To market planners in the home appliance, refrigeration, and air conditioning fields, these estimates should have prime significance.

For these related industries, 1947 gives every indication of being a banner year.



...because refrigeration valves are dependable

The extreme simplicity of construction that makes the precision-built A-P Thermostatic Expansion Valve so **DEPENDABLE** in long-life service is an additional advantage to the service engineer.


Every part of this important A-P needle assembly has been tested and inspected many times for its vital task of accurate refrigerant control. The Stellite needle, for instance, is made from special stock which must be subjected to chemical analysis and laboratory furnace to be absolutely sure every bar of stock has the correct percentage of every required element *before* machining and production. The finished assembly is checked under instruments working to *millionths* of an inch accuracies, before its many operating tests.

Simple construction, easy installation and inspection, **DEPENDABLE** supersensitive refrigerant control—are proven superiorities that keep A-P Refrigeration Valves popular with engineers and owners alike.

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Port Plans Erection of Large Freezing Plant

LONGVIEW, Wash.—Authorization was recently granted by the Longview Port Commission to Terminal Manager Harvey Hart to launch plans for the eventual construction of a large refrigeration and quick-freeze plant at the Columbia River port docks in Longview.

The step followed discussion of the need for such facilities in the area between board members and representatives of food processing firms with acreage in the region.

At the same time the commission granted Washington Packers, Inc., permission to establish a temporary refrigeration plant in a building they now lease on the port property. This

will be used in handling crops in the area until the new plant is constructed.

Plans call for operation of the new plant by the port. It will be open to all processors. Mr. Hart said he expected to have full data regarding the project ready for the port commission within 60 days, so that definite plans for construction could be considered.

Trio Organizes \$100,000 Locker Firm in Red Springs, N. C.

RED SPRINGS, N. C.—Capitalized at \$100,000 Colonial Frozen Foods of Red Springs, Inc., has just been organized here, to operate freezer locker plants. The principals include Hiram Grantham, J. D. McLean, Jr., and James W. Owens, all of Red Springs.

Servicing Truck Refrigeration Units

Instalment No. 19

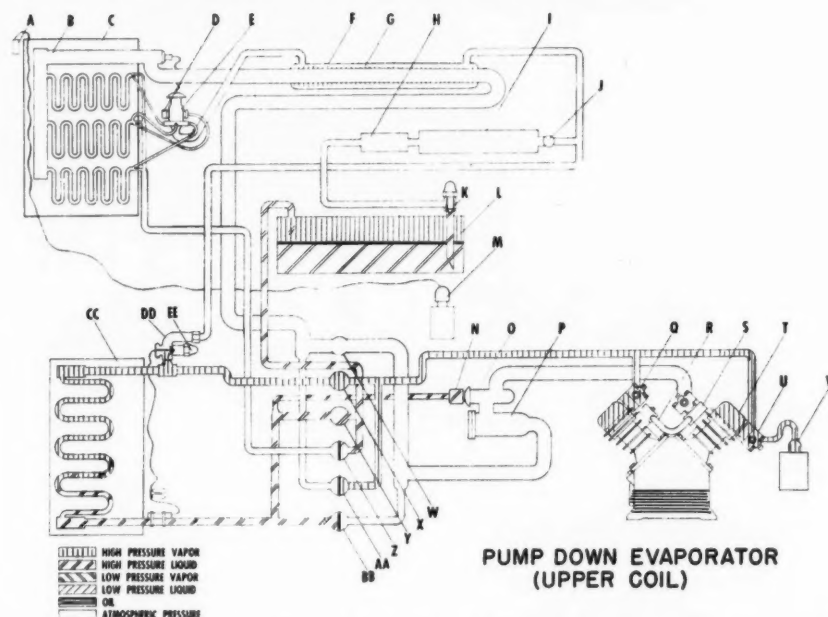


Fig. 23 shows the various states of refrigerant in the Trail-Aire unit when the evaporator (C) is pumped down.

Key to drawing: A—thermostat bulb; B—evaporator suction header; C—evaporator coil (upper); D—expansion valve adjusting stem; E—multi-outlet thermostatic expansion valve; F—heat exchanger; G—heat transfer fins; H—liquid line strainer; I—dehydrator; J—liquid indicator; K—receiver service valve; L—receiver tank; M—thermostat temperature control; N—load limiting valve bellows; O—suction load limiting valve; P—suction line strainer; Q—compressor discharge service valve; R—compressor suction manifold; S—compressor suction service valve; T—compressor; U—compressor discharge service valve; V—high pressure cut-out; W—hand valve suction (cooling); X—hand valve discharge (cooling); Y—hand valve liquid return (cooling); Z—hand valve liquid return (heating); AA—hand valve discharge (heating); BB—hand valve suction (heating); CC—condenser coil (lower); DD—thermostatic expansion valve; EE—thermostatic expansion valve adjusting stem.

Pumping Down Evaporator

To pump down the evaporator (C) it is necessary that the following valves be open:

1. Cooling suction hand valve (W).
2. Cooling discharge hand valve (X).
3. Cooling liquid return hand valve (Y).
4. Compressor discharge service valve (U).

The compound and high pressure gauges should be installed as described above.

The following valves must be closed to pump down evaporator (C):

1. Heating liquid return hand valve (Z).
2. Heating discharge hand valve (AA).
3. Heating suction hand valve (BB).
4. Receiver service valve (K).

After the gauges have been installed and the valves properly opened or closed, start the unit and observe the compound gauge in the compressor suction service valve (S). Operate the unit until the compound gauge reading is 5 in. vac. When the unit is stopped the pressure may rise to 10 lbs. or more, so the unit will have to be started and stopped (cycled) until the pressure will remain between 3 and 5 lbs. as indicated on the compound gauge.

Caution: Do not open any part of the system when the compound gauge reading is below 3 lbs. per sq. in., for air may be drawn into the system and serious damage may result to the unit.

Soldering Joints

When soldering any joints in the system the pressure on the lines must be reduced to atmospheric (0 lbs. gauge), or the solder will be blown from the joint. The surfaces to be soldered, of course, must be clean and free from oil and dirt.

When soldering any joints in the

upper compartment it is best to first disconnect the 1/4 in. SAE flare nut from the equalizer connection of the multi-outlet thermostatic expansion valve (E).

It would be a rare case when it is necessary to remove the evaporator coil (C). All joints in the evaporator coil proper are silver soldered—tube turn bends, suction manifold and feed lines from the thermostatic expansion valve.

The liquid line is soft soldered into the expansion valve base. The suction line is soft soldered into the suction header, and the third line (liquid return line on the heating cycle, which is "dead" on the cooling cycle) is soft soldered. These three lines can be easily disconnected if it should be necessary in order to remove and replace the upper coil (C).

Replacing Expansion Valve

Partial or total loss of the charge in the thermal element of plugging may require the removal of the multi-outlet expansion valve (E).

Symptoms of a lost charge or plugged valve would include no refrigeration, very low compound gauge reading, frosting at the valve base and feeder tubes to the coil.

To remove the valve (E):

1. Remove the thermal bulb from the well in the suction line.
2. Disconnect the 1/4 in. SAE flare connection from the equalizer connector in the valve.
3. Remove the two cap screws from the base of the valve and lift the cage assembly from the base.
4. Remove the cartridge.

Caution: In replacing this cartridge make certain that all the old gaskets were removed with the old cartridge and that all three new gaskets are in place.

If the valve continues to plug, it may be necessary to install a small liquid line screen in the liquid line ahead of the valve.

Wilson ZEROSAFE Reach-In Farm Freezer Is Years Ahead...

SINCE 1939

Enthusiastic public acceptance and constant daily use have proved Wilson ZEROSAFE the greatest reach-in farm freezer in America... These years of trouble-free ZEROSAFE service are your guarantee that "Freezers by Wilson" will continue to revolutionize American menus by making frozen fresh foods a part of daily living. THE NEW ZEROSAFE IS NOW GREATER THAN EVER... There is a ZEROSAFE size for every need: 15 cu. ft. (illus.) and 25 cu. ft. Self-Contained Models; and Sectional Models from 22 cu. ft. up to 120 cu. ft.

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DIVISION OF WILSON CABINET CO.
SMYRNA DELAWARE

NEW Control For Refrigeration Jobs . . .

It's the PENN 270 Series! This new, different and better line of controls is the first and only line in the refrigeration and air conditioning fields to feature a load-carrying, 2-pole switch. In reality, this control provides two switches in one... yet this plus value of application versatility can be obtained without paying a premium.

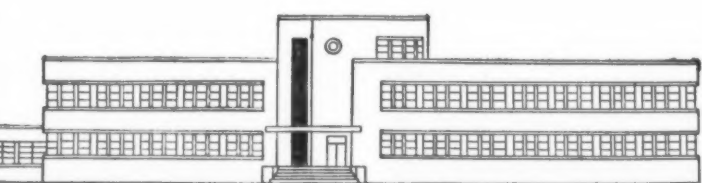
Where protection against single phasing is provided, the PENN 270 can control polyphase motors without line starters. It can control two separate load circuits. It always breaks the "hot" line when wired in single phase circuits as a 2-pole switch.

Investigate this new 270 series. It means greater dependability, more efficient operation, freedom from contact trouble, better electrical performance, greater accuracy regardless of mounting position or vibration conditions, close differential, ease of installation and simple, easier adjustments. Penn Electric Switch Co., Gosben, Ind. Export Division: 13 E. 40th St., New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.



Series 270 and 272 PENN "Single" temperature or low side pressure controls. Also (not shown) Series 271 and 273 PENN "Dual" Controls which combine in one unit a temperature or low side pressure actuated mechanism and built-in high pressure safety cut-out.

PENN



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HASCOBILT Parts

SUCTION and DISCHARGE
VALVE, DISC, REEDS and SPRINGS
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HASCO, INC. If your jobber can't supply you, send
GREENSBORO, N. C. for illustrated catalog and price list.

Appliance Dept. Head Must Be Competent Administrator, Lunt Tells NRDGA Meeting

NEW YORK CITY—During 1947, which should be "the appliance year of all time," major stores can hold their war gained position in the appliance field by relearning the use of basic selling tools and adding new ones such "as our ingenuity will bring forth," Daniel H. Lunt, divisional merchandise manager of Jordan, Marsh Co. of Boston, declared at the annual convention of the National Retail Dry Goods Association recently.

Mr. Lunt urged department store executives to throw aside their complacent dependence on glamorous appliance department layouts and their big names and concentrate on getting their sales forces rolling under a good competent department head.

In getting a good sales manager for the appliance department, Mr. Lunt emphasized, "the accent should be fully as strong on management as on sales. The job is not one to be entrusted to a glorified super salesman without him having more important qualifications along with his sales ability."

"He must be a good analyst and planner, constantly evolving new selling techniques, exploiting best sellers, determining means of breathing new life into laggard items and classifications," Mr. Lunt asserted. He went on:

"He should have a keen eye for good advertising copy. In no other classification is it so necessary for the department manager to work out his own newspaper publicity."

"The success of an appliance manager over his competition is not infrequently the result of careful attention to this factor. If he's a sales manager worthy of the name, he should surely know what merchandise features to stress and how to word copy better than the advertising department technician, who should assist rather than initiate."

"His relationship to salesmen begins with hiring. Here again the appliance manager should do the job himself. He is the one person in the store who is qualified to judge the type of person required for this most specialized type of salesmanship; the employment department should be called upon only to cover the necessary routing and the checking of references."

"Once the salesman is hired, the appliance department head must spend long hours training the newcomer not only in the merchandise itself but in basic salesmanship."

"And this training program must be a continuing, regularly scheduled business, because every man on every sales force and the department manager himself, for that matter, needs brushing up and polishing not only now and again, but all the time."

"Therefore, regularly weekly and less frequent special meetings should be programmed. These meetings must be carefully prepared, and will cover merchandise features, sales records (individual and group), current

advertising, store policy, etc. In general, they should be short; not over a half hour."

"The appliance manager must know what each sales person is accomplishing, or failing to accomplish, at all times, giving individual help to those who are falling down. He must maintain a position somewhere between being 'one of the boys' and a 'stuffed shirt.'"

"It seems to be inevitable that disputes often arise among specialty salesmen working together, and the manager must frequently be arbiter. He must give 'em hell where admonishment is warranted and credit where credit is due."

"All of us like recognition for a good job done, and will usually work better, if not harder, for it. Strangely this is a psychological fact too frequently missed."

"The appliance manager is also responsible for the multiplicity of detail required of all department managers as to stock control, ordering, markdowns, invoice checking, and all the rest."

"However," Mr. Lunt averred, "the department manager should devote his talents primarily to creative selling and sales promotion."

"Whatever may have been possible in the past year or so, the time has now come when we shall need a hard fisted, brilliant sales organization as never before."

Mr. Lunt recommended that the department manager establish a close cooperative relationship with the service department and familiarize himself with the latter's problems.

He will thus be in a position to discuss intelligently, with his resources, matters requiring correction of design and construction faults.

"He will also be able to act as mediator between the opposing viewpoints of the man who sells the merchandise and he who installs and services it."

"To accomplish this, and as a part of the sales training program, periodic joint meetings of sales and service groups should be planned. In these meetings the manager must maintain strict control, making sure that servicemen's gripes are not allowed to poison the salesmen."

Mr. Lunt pointed out that with the right compensation plan, appliance selling is still so attractive that a store may be very selective in its choice of men. He recommended the combination salary and commission type of payment which is "not only more attractive to the prospective salesman, but tends to keep him in a happier frame of mind once on the job."

In addition, he said, incentive features may be woven into the compensation plan to stimulate greater volume, higher unit sales, sales on slower classifications, and the like. He was highly in favor of sales contests.

An appliance salesman, Mr. Lunt declared, should be ambitious and

keenly intelligent. "He need not necessarily be seasoned; on the other hand, he should be experienced enough to have knocked off the crass assurance typical of extreme youth. And it should be borne in mind that war records don't do that. In fact, some regular army officers are worse at 50 than most boys are at 20."

"The old timer appliance salesman is something of a problem. Especially if he has been carried along in your appliance department throughout the war years, he's rather sure to think that you owe him more than the government owes a G.I."

"He's doubtless grown soft and nothing but stiff competition against newer blood will bring him back where he belongs. If you haven't cut out special privileges to these fellows, the time to begin is now."

"Generally speaking, the best age at which to hire appliance men is 30

though surely there is plenty of good older material, and often sound men are found who are several years younger."

"Never allow dead wood on the appliance floor if you can avoid it, and throw it out ruthlessly as fast as it turns up. Nothing is as expensive as an unproductive salesman."

Mr. Lunt favored confining the sales efforts of appliance salesmen to one or two categories. "Thus he will learn his way about without losing business better handled by more seasoned men, while your secondary classifications, sometimes neglected, are given special attention."

A good service organization is an indispensable adjunct to the appliance department, he declared.

"Dependence on the outside company is completely inadequate. The outside company either services its

own lines exclusively leaving much of your merchandise uncovered; or, being in business for profit, will either cause customer ill will by slacking the job when most needed, prove highly expensive, or both."

"The initial order is only one step in building sales. Efficient delivery, installation, and maintenance will do more than anything else to develop good will and future business."

"I know of no other way in which a store can cope with trade-ins than through its own service organizations, which, in the ideal setup, should be responsible for appraisals, and thus protect the selling department from loss."

"During 1946, the bulk of the appliance business has been done with new owners of appliances, but it is pretty certain that in 1947 replacement sales will become far more important."

RUGGED Construction

RANCO Controls are Built to "Take It"



All working parts of Ranco controls are made of stainless steel or steels heat-treated by a special Ranco process.

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FOR 43 YEARS the "Hotpoint" trade name has been the byword for the finest in electrical household equipment. It has grown in stature with each passing year—thanks to a policy of "quality first," to consistent advertising, to the careful development of an outstanding dealer organization.

Today the Hotpoint line consists of electric ranges, refrigerators, freezers, dishwashers, disposals, water heaters, complete home laundry equipment, and a variety of commercial cooking equipment. Today, too, Hotpoint stands for "America's Foremost Kitchen Planners."

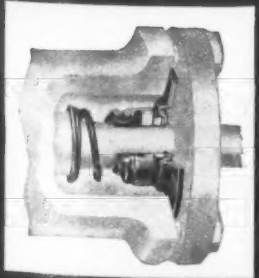
Recognizing the increasing value of identifying itself with its trade name, Edison General Electric Appliance Co., Inc., announces that hereafter it will be known as Hotpoint, Inc., a General Electric Affiliate.

HOTPOINT Inc.

A General Electric Affiliate

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Philco Corp. Announces Four New Appointments In Purchasing Dept.

PHILADELPHIA—Appointment of William Chaffee as purchasing agent of the refrigeration division of Philco Corp. and Wilson Oelkers as purchasing agent of the radio division was announced by William MacMurtrie, general purchasing agent.

At the same time George Hulse was named assistant to the general purchasing agent and Louis Nieman assistant purchasing agent of the radio division.

Mr. Chaffee has been in the purchasing department since 1934.

Govt. Sets Up New Unit To Help Small Firms

WASHINGTON, D. C.—Creation of a small business unit in the Justice Department's anti-trust division to "assist small business and promote the free competitive system of private enterprise" was announced Jan. 23 by Atty-Gen. Clark.

The announcement followed President's Truman's pledge in his State of the Union message that anti-trust violations would be prosecuted.

Mr. Clark said the unit is "authorized, so far as the law and budgetary limitations permit, to invoke all the power which Congress has conferred to maintain full opportunity . . . in business."

CHIEF ENGINEER WANTED

Exceptional opportunity available now to a man with broad experience in water cooler manufacturing. Must have a thorough knowledge of designing, production and testing. Liberal salary, commensurate with qualifications.

Please submit full details. Box 2216, Air Conditioning & Refrigeration News

Novel Freezer Defrost System Circulates Hot Liquid Through Piping In Evaporator Coil

GRAYSLAKE, ILL.—Faced with serious defrost problems in some of its commercial freezer applications, the Rickert & Crichton refrigeration firm here has developed its own method of automatic defrosting, which circulates a heated liquid through piping in the evaporator coil to melt the frost.

"We have a number of these installed in freezers on mink ranches where they have large freezer storage capacity for mink food, such as horse meat, fish, tomatoes, and skimmed milk, declares Fred A. Rickert of the firm, co-inventor of the defroster along with Roy E. Crichton.

"None of this food is covered or wrapped, and, of course, creates one of the very worst problems of frost. We found that the ranchers didn't care to spend time each day to operate any manual defroster as would be necessary under these conditions, so over a period of time we have developed a defroster which is completely automatic.

"Two of these defrosters are installed at a large locker plant, and they are handling the job very efficiently," claims Mr. Rickert. "All of our defrosters are installed on machines operating on a -18° to -5° F. cycle. It takes 15 to 20 minutes to complete the defrost cycle."

Component parts of the defrost system consist of a heater tank, electrically driven pump to circulate

the defrosting medium around the evaporator coil, and a timer switch and electrical relays to turn the defrosting cycle on and off.

The liquid defrosting medium is heated in the tank by means of electrical immersion heating elements. The tank also contains a pump. Tubing runs from the pump to the evaporator coil, entering around the defrost drain pipe. It is connected to one or two passes in the coil itself, makes a loop in the bottom of the drain pan, and then returns beside the drain pipe to the heater tank.

It is necessary to heat the drain pan and pipe in the vicinity of the coil to prevent condensate freezing there, points out Mr. Rickert.

The timer switch can be set to defrost as often and for as long as necessary. When the timer reaches the pre-selected defrost time it actuates a set of relays. The relays (1) stop the fan in the blower coil; (2) close a solenoid valve in the liquid line; and (3) start the circulating pump in the heater tank. At the end of the defrost period the time clock reverses this procedure.

Closing the solenoid in the liquid line at the beginning of the defrost cycle allows the condensing unit to pump down so there is no overload when the machine starts up after the defrost period, according to Mr. Rickert, who adds that this defroster will work with any type of refrigerant or on a brine coil.

Arms Firm Plant Makes Only Ice Cream Cabinets

UTICA, N. Y.—Activities of the Utica plant of the Savage Arms Corp. now are centered around manufacture of ice cream cabinets, it was announced by Fred F. Hickey, president of the company.

The small arms manufacturing equipment of the Utica plant has been transferred to its J. Stevens Arms Co. plant at Chicopee Falls, Mass.

Mr. Hickey implied that final disposition of the Utica plant is not definite, but that production of the ice cream cabinets here is tentatively scheduled to continue.

Harvester Sets Up Refrigeration Sales, Service Organization

CHICAGO—Development of a special refrigeration sales and service organization for International Harvester Co. was announced recently by A. J. Peterson, manager, general line sales department.

Six district sales representatives will direct refrigeration sales policies in their respective territories and will aid in selection and training of branch house wholesale refrigeration salesmen. The following appointments have been made by H. N. Ross, product specialist, refrigeration, who is supervisor of refrigeration sales activities, assisted by E. B. Derr:

N. M. Callahan, eastern district; Ross W. Romine, central district; W. O. Bolitho, western district; N. L. Holman, southwest district; H. F. Thornburg, southern district; H. L. Sawvell, northwest district.

With T. P. Hyde heading the refrigeration service section of the general line service division, assisted by A. V. Christensen, the service organization will parallel that for sales. Thus far, R. J. Kretz, in charge of the general line service division has announced these appointments as refrigeration service representatives:

R. B. Seacord, eastern and southern districts; H. B. Chilson, central and northwest districts.

All eight of the men whose appointments to district sales and service posts have just been announced have long records with Harvester. They will work out of Chicago, but their headquarters will be in their respective districts.

15 End Kansas State Air Conditioning, Refrigeration Studies

MANHATTAN, Kan.—Fifteen men will receive certificates in February from a 13-month short course in refrigeration and air conditioning, it was announced by G. A. Sellers of the mechanical engineering department at Kansas State College.

Students, who began the course in January, 1946, have taken two semesters of welding and machine shop work. They have had work in the servicing of domestic and commercial air conditioning units. Also included in the course was work in business management and business correspondence.

Most of the men enrolled will take positions as servicemen or salesmen for air conditioning and refrigeration companies.

Members of the class and their hometowns include James H. Bowman, Manhattan; E. C. Blood, Wichita; H. W. McFarlane, Burlingame; J. F. Brickell, Herington; Keith L. Taylor, Le Roy; R. T. Oliver, Burlingame; K. W. Anderson, Neodesha; Chalmers Clark, Ottawa; E. E. Hubbard, Madison; K. T. Phares, Wakeeney; Vernon R. Buell, Manhattan; LeRoy C. Hembrough, Atchison; Virgil B. Watts, Arkansas City; Roy E. Bohnert, Mankato; and Leonard L. Werner, Kirwin.

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Our entire time is devoted to the manufacture, research and development of them. Write for particulars.

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121 Main St. Sioux City 4, Iowa

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"...and it weighs so much less!"

Important to the manufacturer of cabinet and other types of self-contained refrigeration units is the light weight of the new Mills Direct Drive Compressor. It makes possible lighter support structures, easier handling, and reduced transportation costs.

This saving in weight is possible partially through a reduction in size and the elimination of drive wheels and belts. Yet there has been no sacrifice in accessibility and ease of service and repair in the field. Through a number of remarkable engineering developments, the Mills Direct Drive Condensing Unit is more efficient than either hermetic or conventional belt-driven compressors.

MILLS
Direct Drive
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First post-war addition to a distinguished family of air- and water-cooled condensing units

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MARVEL of BEAUTY

Dry Beverage Cooler

6, 8, or 10 feet long
39 inches high, 30 inches wide

MARVEL of Efficiency

Beautiful stainless steel and polished aluminum outside with polished aluminum interior. Heavy duty fin-type coils, designed to give fast cooling and less frosting. Rugged construction, first quality materials throughout. Stainless steel lids slide away or lift out. 8-inch utility shelf. Removable dividers inside. Toe space under edges.

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Wrong Type of Extinguisher Can Prove Fatal

Fire Officer Warns Against Using 'CTC' Gun In Air Conditioning Duct

DETROIT—A reader of AIR CONDITIONING & REFRIGERATION NEWS, who is also a volunteer fire fighter, believes that there is a danger in using a type of carbon tetrachloride fire extinguisher in confined spaces such as ductwork.

This reader, Thomas H. Rady, Jr., of Amsterdam, N. Y., makes reference to the story and picture on page 21 of the Jan. 20 issue of the NEWS. Under the headline "Solving the Duct-Cleaning Problem," the story was told of a St. Louis firm that used midjets to clean ductwork, and how these men protected themselves against the hazards of fires in the ducts by carrying a fire extinguisher with them.

Says Mr. Rady in his letter:

194 Guy Park Ave.
Amsterdam, N. Y.

Editor:

Having been a subscriber to your publication for sometime past, I have the greatest praise for it. It has always contained more information on the constructive side of progress in this field than many of the other publications.

The writer hopes to provide a bit of constructive information which you may add to your publication without any reservation on the part of the writer before any destruction occurs.

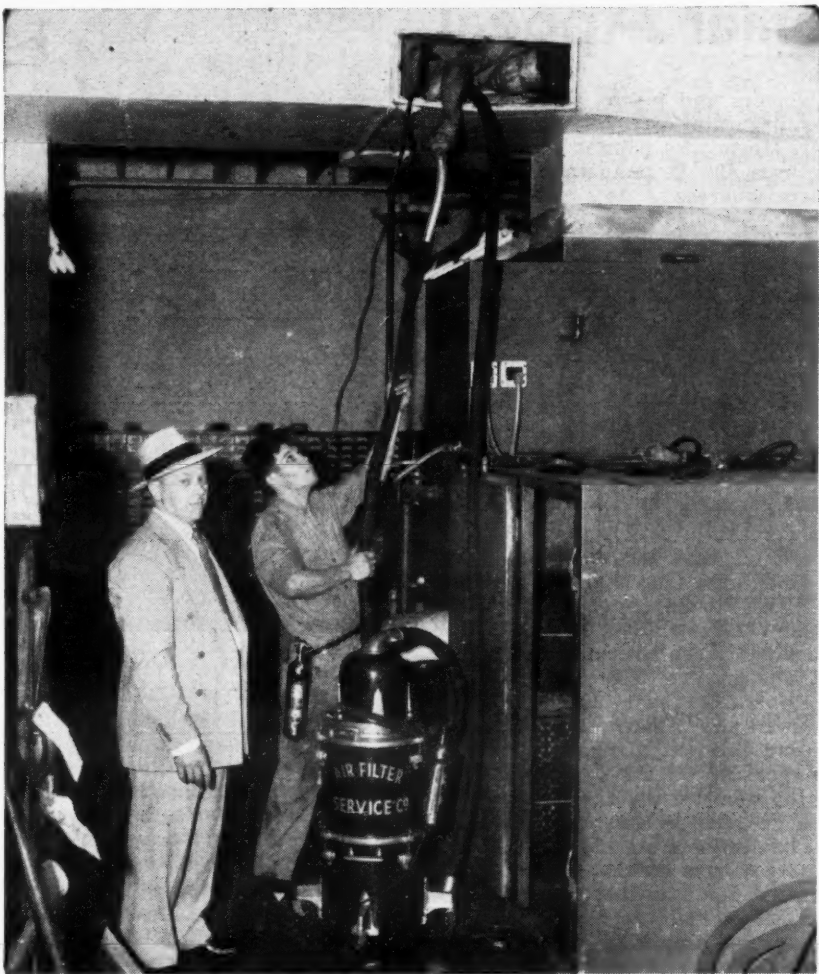
Due to the large number of Hotel fires and "just plain" fires, a suggestion to the wise should be sufficient. On page 21 of the Jan. 20 issue of the NEWS I observed a photo with a fire extinguisher. Fire extinguishers are a great friend in time of need. Nevertheless, the one pictured is the wrong type for this particular operation. Just as a good many of the servicemen of today want to make working conditions safe as possible, Mr. Misbauer had made what he believes is a good step toward that goal. He deserves credit for his effort.

In reference to myself, I am a serviceman for pay. For free, I serve as a line combat fire officer of the local Fire Department. Now after some 12 years, I can say from personal experience that a CTC extinguisher can prove fatal if used inside of an air conditioning duct in an effort to stop a flash fire.

I do hope that in an effort to further promote safety in respect to fires, you will clarify any illusions which may be entertained by other servicemen in respect to using this type of extinguisher.

I do not sell fire extinguishers. However, there are CTC and carbon dioxide guns in both of my service vehicles and each has different characteristics although either will conquer the same class of fire.

Perhaps the rest of the boys will



This picture which appeared previously in the NEWS shows a crewman equipped with a carbon tetrachloride gun which, Mr. Rady contends, is extremely dangerous to use should a fire occur in a duct.

accept this as a tip of the trade from me as a part payment for the tips which they have made available for my use.

Every community has its fire department and fire chief and it should be recommended that the chief of the fire department be consulted. If he is a live wire and knows his tools (as we in this field know ours), I am sure that it will be to the mutual benefit of everyone to adhere to his advice.

Speaking of the air conditioning business—let's keep the fires out of it.

THOMAS H. RADY, JR.

Felix Becomes Works Manager In Crosley's Cincinnati Plants

CINCINNATI — Appointment of Clarence G. Felix as works manager of the Cincinnati plants of the Crosley Division, Aviation Corp., has just been announced by R. C. Cosgrove, general manager.

Mr. Felix, who has been serving as manager of radio sales, has been associated with Crosley since 1927. From 1930 to 1933 he was an engineer in the household and automobile radio development department and was appointed chief engineer in charge of automobile radio development in 1933.

Home Wiring Book Lists Air Conditioning Needs

DETROIT—In a new adequate-wiring booklet just published by the Electrical Association of Detroit, refrigerated air conditioning and air cleaning equipment are listed among special electrical household conveniences "which are rapidly gaining acceptance."

The booklet, "How You Can Make Your House a Home Electrically," covers the adequate wiring specifications for the Association's certification program. It emphasizes the value of a "certified electrical home."

Contents are divided into four sections: "Making Your House a Home"; "Electrical Terms"; "Electrical Specifications"; and "Special Equipment." Under the last heading, the Association makes note of air conditioning and air cleaning equipment, lamps for bacteriological control, and therapeutic lamps.

"We have used the National specifications as a basis for your requirements," said Herbert E. Cook, Association director. "We did, however, feel that a deviation from that form has commercial sales value."

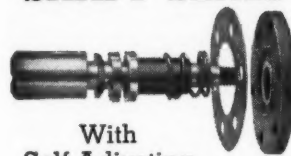
"Variations from the National standard—usually higher in ours—are predicated on local conditions with the expectation that 'the better type of home will justify a higher degree of electrical living.'"

F. & L. Refrigeration Co. Operating In Shreveport, La.

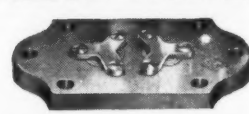
SHREVEPORT, La.—The F. & L. Refrigeration Co., Inc., 804 Spring St., has been incorporated to engage in contracting, repairing, servicing, and selling refrigeration and air conditioning parts with W. G. Free as president, Guy Morrison as vice president, G. R. Lieber as treasurer and manager, and Charles H. Free, Jr. as secretary.

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With
Self-Adjusting
Sleeve Lock.



Only Chicago valve
plates have replace-
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Your Product
...if its performance
depends on temperature
or pressure control...
that product
can be no better
than the controls
with which it
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ATTENTION DEALERS!

This is the original Nolin Dry Beverage Cooler or All Purpose Refrigerator that you have heard so much about and which so many manufacturers have tried to duplicate. We are still the leaders because of the following features: One-third more coil surface, insulated for heavy duty service, individual disappearing modernistic doors, coiled freezer shelf, removable base for under bar installation, beautiful polished aluminum or stainless steel exterior. Hailed as the best cooler on the market today. Following sizes available 4', 6', 8' and 10'. Special crating for overseas shipments.

NOLIN MANUFACTURING COMPANY, INC.
1100 MADISON AVENUE
MONTGOMERY, ALABAMA (PHONE 4418)

125 ft. Frontage of Refrigerated Display Cases Boosts Super Food Store's Customer Appeal

LINCOLN, Neb.—Karl P. Meyer, owner and manager of the Freadrich Bros. Super Food Stores in Lincoln, has probably the most modern and diversified system of refrigerated storage and self-service vending fixtures of any store or group in the city. Results have been salutary, he declares, and increase in sales volume in various departments ranges from 30 to 50%.

Unusual applications range from the use of Pliofilm packaging of fresh meats to allow self service in a new store just established at a housing project for ex-G.I.'s near Lincoln, to leasing of a section of Freadrich Bros. No. 2 store to a frozen food locker firm, with inside connecting door.

The No. 1 store located in the downtown shopping section has established a reputation for using the latest in modern equipment, and Mr. Meyer said that public acceptance of improved refrigeration equipment during the past year has been highly gratifying.

For example, hundreds of patrons have asked about "Electronic Pasteuray" since it was installed last November, and meat and produce department sales have jumped percepti-

bly, although partly due to a seasonal trend. Patrons are taken back to the walk-in meat boxes to see for themselves the method used in protecting and conditioning meats with Pasteuray.

Mr. Meyer used newspaper advertising to announce the Pasteuray installations, as follows: "We are proud to announce that something new has been added! Electronic Pasteuray protection for meats and produce! Our Pasteuray installation safeguards meats against spoilage, discoloration, odor, and stickiness. This leadership in modern food preservation assures you of meats always in top condition—fresh, juicy, and tender—with full flavor and vitamins. . . ."

The No. 1 store has approximately 125-ft. frontage of refrigerated retailing cases, including the meat cases, and Pasteuray is used in all meat and produce equipment as well as in the three walk-in coolers in as many stores. Pasteuray in the walk-in boxes tenderizes meat in two to three days, Mr. Meyer said, whereas it formerly took about 10 days. Meat is suspended on swivel hooks so it can be turned, and light fixtures can be taken down from the ceiling of

the coolers and placed any place in the refrigerator.

Mr. Meyer also pointed out that he now uses 42° F. temperature in the coolers whereas a 34° to 36° temperature was required previously. This effects a saving in refrigeration costs and makes the work of the condensing unit considerably easier.

Installation of new reach-in type vegetable refrigerated cases along with mirrored backgrounds for both the fruit and vegetable compartments has increased sales of these products a conservative 50%, the Lincoln merchant stated.

Recent replacement of an old-style covered cabinet for frozen foods with a new reach-in case, and addition of a reach-in case for milk and dairy products, have increased sales volume on those items by approximately 30%. The new 10-ft. reach-in for frozen foods has been installed at the end and in line with the two new vegetable 8-ft. reach-ins.

Mirrors have been installed in a slanting position at the back of all three cases to enable customers to see the items in the cases from some distance out on the floor, and to make selection from the cases easier. The same type of mirror installation has been made on the fruit compartments adjoining the refrigerated cases, thus providing an impressive 51-ft. series of mirrored display for frozen foods, vegetables, and fruits.

The vegetable reach-ins feature a humidifying treatment to keep the produce constantly fresh and green.

Mr. Meyer declared that the high degree of visibility for vegetables and frozen foods, plus easy accessibility and attractive appearance of the displays, have accounted for the 50% increase in sales. Fluorescent lighting fixtures also help to make the mirrored display fixtures more compelling to customer attention than ordinary.

Mr. Meyer formerly had three old-style 10-ft. boxes fitted with lids for selling frozen foods. He finds that he sells more goods since he installed the 10-ft. reach-in and has about as

Mrs. Vet Finds Shopping a Cinch Here



Karl P. Meyer (left), looks on as an ex-GI clerk points out to a veteran's wife how easy it is to shop for a Pliofilm-wrapped steak vended from a refrigerated reach-in case.

much storage capacity in the one new case as he had in the three old boxes. Two of the old boxes have been relegated to use for storage only, while the third was moved to another store.

Across the store and opposite the vegetable and frozen food reach-ins is the meat department, where a 10-ft. reach-in has been added for milk and dairy products, adjoining the meat cases. Customers have been buying

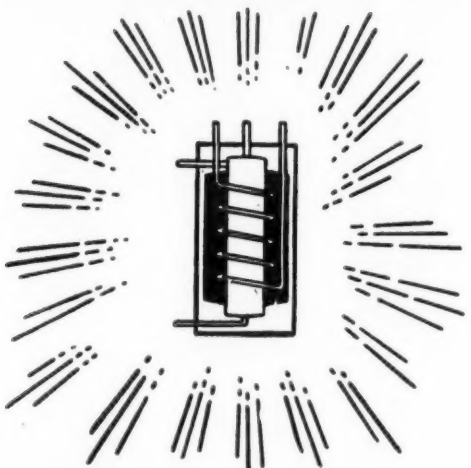
about a third more dairy products since the new case was added and they no longer have to open a door to reach the goods.

A fresh-fish case on the meat side of the store completes the refrigerated display. Chipped ice is used in this box.

Mr. Meyer declared that the combined utility, accessibility, and attraction (Concluded on next page)

THERMOBANK

automatic



defrosting

Means:

**LOWER TEMPERATURES
HIGHER EFFICIENCY
HIGHER HUMIDITY
ATTENTION-FREE OPERATION**

With the Thermobank, temperatures of 32° F. to -40° F. and below can be maintained as easily and with the same freedom from frost as temperatures of 40° F. in a conventional system. Operating with practically frost-free coils, Thermobank maintains the desired low temperatures with higher back pressures, less temperature differential between air and coils; and consequently higher humidity, less drying and more efficient compressor operation.

Essentially, the Thermobank System of Automatic Defrosting consists of a forced convection cooling unit, automatic time controls and a heat reservoir. A portion of the heat extracted during the refrigeration cycle is banked in the reservoir from which it is released to the refrigerant during the defrost cycle.

Send for Booklet 16-N explaining Thermobank System and including useful low temperature information and time-saving rapid selection tables.

14

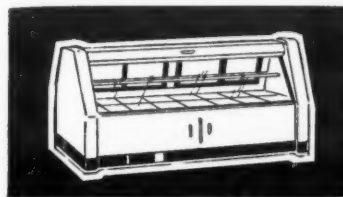
KRAMER TRENTON CO.

HEAT TRANSFER PRODUCTS

TRENTON 5 • NEW JERSEY

IT'S THE COILS THAT COUNT!
KRAMER

FALL IN LINE WITH FOGEL

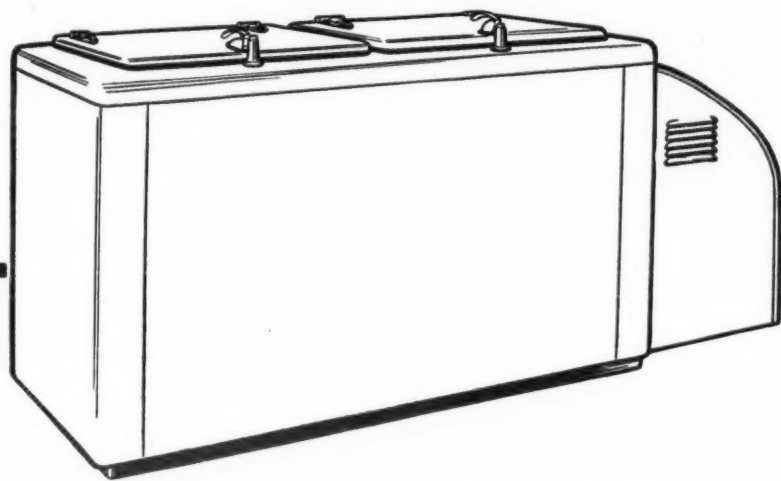


JOIN OUR HUNDREDS OF
SUCCESSFUL DISTRIBUTORS
SELL OUR COMPLETE TOP-
QUALITY LINE

INTERESTING PROPOSITION
TO QUALIFIED DISTRIBUTORS

A FEW TERRITORIES STILL
AVAILABLE. WRITE TODAY!

FOGEL REFRIGERATOR COMPANY Since 1899
5400 Eadom St., Philadelphia 37, Pa.



FREEZER CABINETS

WORTHY OF YOUR BEST EQUIPMENT

SANITARY 12.5 CUBIC FOOT MODELS

AVAILABLE COMPLETE, LESS CONDENSING UNIT

Attractively modern in style, heavily built with steel welded frame, rich in many unusual and exclusive quality construction features, SANITARY Freezer Cabinets are now in limited production for shipment on a 30 to 60-day basis. Each cabinet is complete with freezer plates, cold control and "Freon-12" expansion valve requiring merely installation of your own condensing unit. Typical of SANITARY design and engineering, every detail in these Freezer Cabinets is aimed at long service life, high efficiency in food freezing and storage—at lowest operating costs.

PLACE YOUR ORDER

for these "top quality"
SANITARY Freezer Cab-
inets TODAY.

SANITARY REFRIGERATOR COMPANY

MANUFACTURER

FOND DU LAC, WISCONSIN

Ice Refrigerators For More Than 40 Years
Quickfree Farm Locker Plants Since 1939

Adjoining Locker Plant Attracts Additional Trade, Figures Reveal

(Concluded from preceding page)

tiveness of refrigerated display has been one of his business' greatest assets. Being able to offer a much wider variety of foods at all seasons means thousands of dollars in added profits per year, he pointed out, and illustrated his point with the remark that he has about 43 different kinds of fish to sell at all times. Customers naturally go to Freadrich's for seafoods and thus form the habit of trading there for all market needs.

Refrigeration units are located in the basement at the No. 1 store, with 10 small units grouped together for easy accessibility and inspection. A 7-ton condensing unit is located in an adjoining section of the basement. Separate units are employed to avoid serious consequences should a refrigeration system go out of order, and should one unit go out under the present system, it can be switched over to an auxiliary.

A self-service grocery and market exclusively for veterans and their families is an innovation inaugurated late in 1946 by Mr. Meyer at Husker-

ville, former army air base near Lincoln, which has been converted to a housing project for married ex-G.I.'s attending the University of Nebraska. Guiding policy of the new store will be to cut expenses through concentration on self-service, and passing the savings on to the veterans. Refrigerated retailing cases are a major factor in cutting overhead in the new store, according to the proprietor.

The biggest problem was to package meats efficiently so that they could be self-served. A new 10-ft. reach-in was installed in the meat department, and Mr. Meyer tried using cellophane at first but found it too porous for good packaging. Substitution of plicofilm has solved the problem of packaging a fair variety of meats, fish, and poultry, as well as dairy products, to speed up the self-service operation. Also installed were a walk-in cooler equipped with Pasteuray and a frozen food vending case.

Mr. Meyer explained that veterans are compelled to watch their food dollars very closely, for the most part, and he is experimenting to see just how cheaply he can operate at a reasonable profit. Through reducing the number of employees, he expects to give the veterans a material reduction in their food costs, thanks to refrigeration and plicofilm.

Another experiment being made by Mr. Meyer entails operation of a locker plant adjoining his super market No. 2. The locker plant was opened early in November, and Mr. Meyer estimated that approximately 200 additional customers per week have been shopping at the super market.

Building in which the rental locker service is located is a wing of the super market and has been leased to the Therien Frosted Foods Storage Lockers of Lincoln. It contains 700 lockers, all of which are rented, plus a long list of prospective renters.

Location is the major factor in a set-up of this kind, according to Mr. Meyer. His location is very good, he explained, because it is in a section of the city where farmers sell their produce and do their shopping. Much of the rental business is with farmers.

L. M. Snell Becomes Sole Owner Of Refrigeration Supply Co.

DALLAS, Tex.—L. M. Snell has bought out the other partners in the Snell Refrigeration Supply Co., wholesaler of air conditioning and refrigeration parts and supplies, and is now the sole owner of the firm, he announces.

"I have assumed all the liabilities of the business and will take care of them on my own account, and in all other respects, the business will be carried on as before with the same personnel and the same direct management in charge," said Mr. Snell.

J. J. Allen to Handle Appliances In New Store

BUFFALO — The newly formed J. J. Allen Co., Inc. has purchased a three-story building at 608 William St. where it will open a general department store, handling electrical appliances. This will be the first of a chain planned in various sections of the country.

The Allen company is headed by Negro business people and is sponsored by the National Negro Economic Foundation.

Joseph J. Allen of Chicago, president of the Allen company, said, "We have spent a substantial sum to redecorate the structure and for equipment. Our first merchandising activities will be centered on the ground floor which contains 15,000 sq. ft. We will expand activities gradually to the other floors."

The property was purchased from William H. Chur for \$50,000. Mr. Chur was president and treasurer of the Siegrist Furniture Co. which he sold last May.

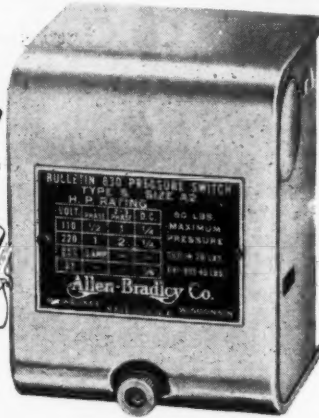
Detrola Corp. Sales Total \$11,112,728 for Nov., Dec.

DETROIT — Consolidated sales of International Detrola Corp. totaled \$11,112,728.10 for the two months of November and December, President C. Russell Feldmann has announced.

These figures for the first months of the current fiscal year compared with sales of \$4,199,067.10 in November and December, 1945, according to Mr. Feldmann.

SIMPLE and DEPENDABLE

Bulletin 830
PRESSURE SWITCH



Here is a pressure switch, which, although low in cost, provides years of unfailing performance. Patented main spring of unique design makes possible an extremely simple mechanism with fewer moving parts. Double

break, silver alloy contacts never need maintenance. Pressures range from 5 to 80 psi, and differentials from 15 to 45 psi. Write for the new Bulletin 830. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.



ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

We Manufacture XL
'Freon' Compressors and Condensing Units (1 to 10 h.p.)
Ammonia Compressors 4x4—5x5—6x6
Ammonia Valves 1/4" to 5" Screwed and Flanged
ALSO
Ammonia Flanges—Strainers—Discharge Check Valves
AIRCRAFT PRODUCTION ENGINEERS
DIVISION OF
THE XL REFRIGERATING CO.
1834-42 WEST 59th STREET CHICAGO 36, ILL.

One Dead, Three Hurt In High Pressure Oxygen Disaster on West Coast

SAN FRANCISCO—The danger of using high pressure oxygen to check leaks or stoppages in refrigeration systems was underscored here recently when one refrigeration mechanic was instantly killed and three other persons seriously injured by a fire and explosion caused by misuse of oxygen under pressure.

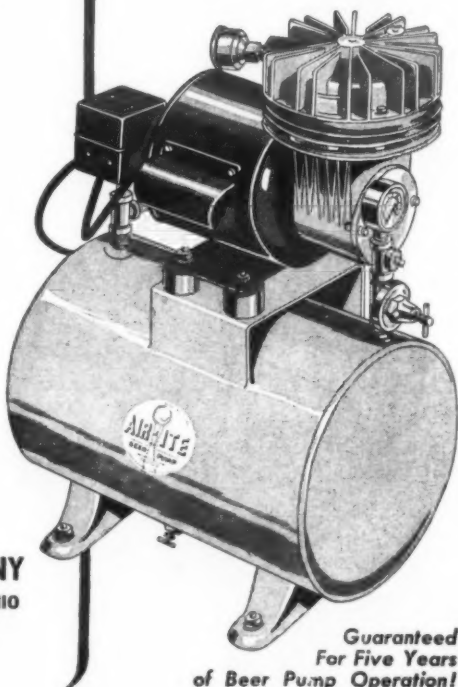
The accident occurred in a large San Francisco insurance building where a self-contained 19-cu. ft. domestic type refrigerator was being installed in the commissary department. After the equipment had been used three days, the contractor ordered a final checkup.

The mechanics, under the impression that there was a leak or obstruction in the system, connected a bottle of oxygen under 2,200 lbs. pressure to the system. One of the men, apparently to expedite matters, applied heat to the 3/4-in. copper tubing carrying the oxygen. He was killed in the ensuing explosion and three watchers were hospitalized with injuries.

Checking the cause of the fire, officials pointed out that oxygen under pressure coming in contact with oil or grease forms an explosive substance.

Experienced refrigeration men point out that systems may be tested by well-known safe methods without the use of oxygen. Mechanics who succumb to the temptation to use a bottle of oxygen are taking unnecessary chances with their lives, business, families, customers, and compensation insurance rates, they say.

AIR-ITE The Balanced Pressure Beer Pump



AIR-ITE . . . the newest . . . fastest . . . most economical beer pump on the market has only three moving parts! Built of die-cast aluminum, its DIATON action, piston type compressor with sealed-in, grease packed bearings requires no lubrication. Cannot contaminate beer. Connected directly with motor . . . there are no V belts or gears to wear. AIR-ITE is available for services other than beer pump operation. Write for details.

RAMSEY-BENNETT COMPANY
430 HURON ROAD, CLEVELAND 15, OHIO

Guaranteed
For Five Years
of Beer Pump Operation!

AN ADDITION TO OUR LINE

MUELLER BRASS CO. SIDE OUTLET DEHYDRATOR



The Mueller Brass Co. Side Outlet Dehydrator permits the renewal of the drying agent without breaking the line. All that is necessary is to remove the flanged end, remove the exhausted drying agent, and replace with new.

All Mueller Brass Co. Filters and Driers are provided with the CONE SCREEN OUTLET, a specially designed filtering element that adds immeasurably to the life and efficiency of Driers and Filters.

Almost all crystalline dehydrating agents are subject to a certain amount of abrasion while a dehydrator is in service. Small portions of the dehydrating agent break down into very fine powder and crystals. Unless a well-designed filtering element is incorporated in a dehydrator, these fine

crystals and powder have a tendency to clog the outlet filter, resulting in restriction to the flow of refrigerant.

With the MBCO. CONE SCREEN OUTLET, such finer crystals and powder are forced to the base of the cone, leaving the center and tip of the screen open to the free flow of refrigerant.

In addition, the cone screen is filled with pure wool which traps such particles that are sufficiently fine to pass through the screen mesh.

Particular attention has been paid to screen areas in Mueller Brass Co. Filters and Dehydrators, so that each size permits efficient passage to the maximum refrigerant volume that is used in a particular size refrigerant line.

MUELLER BRASS CO.
PORT HURON, MICHIGAN

Garvin & Co. Opens Dept. For Appliances on 4th Floor

LANCASTER, Pa.—M. T. Garvin & Co. here has opened an electrical department, although the full expansion planned for the section has been hampered by scarcities of appliances.

Until the electrical department was created, the department store has handled only small appliances in its basement housewares department. The management however, decided to expand its lines and brought the appliances from the basement to the fourth floor to tie in with other home furnishings. Meanwhile, it is also increasing the size of the new housewares department and has already made plans to redecorate the entire basement.

Inland Empire Dealers To Activate 3 Branches

SPOKANE, Wash. — The Inland Empire Electrical Dealers' Association, which plans five chapters, will activate the Spokane, Palouse, and Lewiston branches soon. The Palouse headquarters will be located at Pullman Big Bend in Davenport. Radio dealers are going to be admitted to all five of the association chapters.

The organization aims to promote cooperative activities and demonstrations as well as cooperative advertising and publicity. John F. Boothe is president of the Palouse chapter; Carl Harris is president of the Lewiston chapter.

Stop Right Here and Meet Alice Burnett

She Has Colorado Agog Over Her Unusual Ways Of Selling Home Freezers

DENVER—Meet Miss Alice Burnett, an ex-superintendent of schools and confidant of political figures whose extraordinary refrigeration merchandising methods have made her "the talk of the town" in this part of the country.

Miss Burnett is president of Burnett Appliance Co. here, distributor of Deepfreeze home freezers and Wilson farm refrigeration equipment.

"Refrigeration men in Colorado, Wyoming, New Mexico, and western Nebraska have learned to expect anything in the line of a sales attack when Alice Burnett is around," a business associate remarked. "But dealers respect her unorthodox merchandising methods because her ideas pay off."

Here are some of the methods that have caused people to say "there's nothing too big for Alice Burnett to tackle—or too tough."

Back in 1940, she found herself with a retail store, a Deepfreeze distributorship, and 41 home freezers nobody wanted to buy. In the process of figuring out how to sell the units, she accidentally stumbled onto an important discovery: people have to eat food from a home freezer before they want to own one.

So she began offering \$50 worth of food free to a family using a

Getting Together with the Salesmen



Miss Burnett mixes with her dealers at a sales meeting. Her ideas bring results.

Deepfreeze for 30 days. The food was purchased at wholesale and the cost added to the price of the unit. She sold 28 out of 30 freezers placed in homes in the first 30 days.

When she wanted to sell walk-in refrigerators to a group of Colorado ranch owners, Miss Burnett had a dealer invite them to a dinner in a gymnasium. She then proceeded to have a walk-in set up in front of them while they dined. In two hours the walk-in was assembled and the ranchers were sold.

In 1945 when quotas were slim, Miss Burnett bought a carload of frozen cherries in 25-lb. containers and sold them to housewives for canning through a homemaker's program on a local radio station.

Then she loaded up her refrigerated truck mounted with eight Deepfreeze units and toured the state selling cherries and displaying the unusual truck. High schools were dismissed when the truck rolled into town and local editors gave it front-page publicity.

Miss Burnett's career in refrigeration merchandising came about almost as accidentally as her discovery of how to sell home freezers. She had been elected Delta County (Colo.) superintendent of schools at the age of 24, and, after eight years in public office, had decided to leave active politics.

(However, she did manage the primary campaigns in western Colorado for two of the state's most famous senators. Even today, many

important figures can be seen going in and out of her offices in a Denver hotel.)

One day in 1939, Miss Burnett read a magazine article about Motor Products Corp. By the following year, she had the Deepfreeze franchise for Denver.

That was the beginning of a new career—and very nearly the end. For she had 11 freezers which she couldn't sell.

Nevertheless, when the Deepfreeze distributor faded out of the picture, she bought his carload of freezers and got his distributorship along with it. So now she had a retail store, a distributorship, and 41 units nobody seemed to want.

Undismayed, Miss Burnett decided to use the freezers herself and thereby enlarge her knowledge of frozen foods.

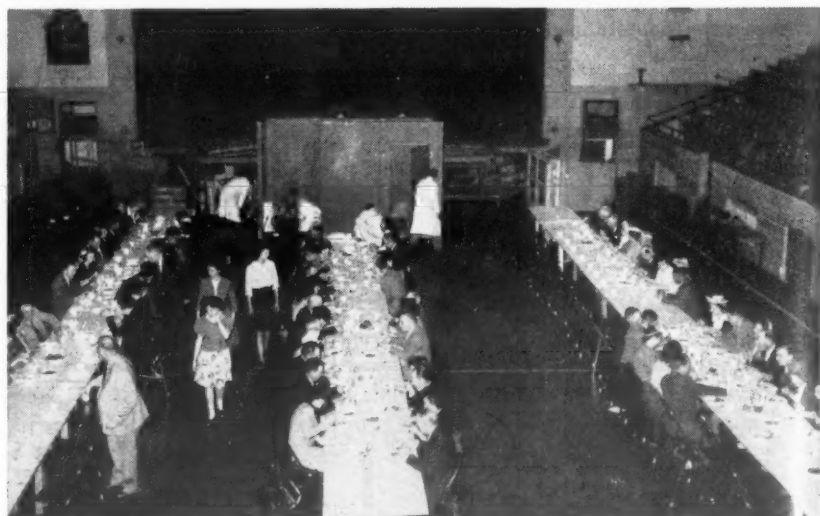
"I had heard all sorts of tales about frozen food," she relates, "that chicken bones turned black when frozen, that some foods were poisonous after freezing, that many frozen foods lacked flavor. I was curious."

The decision, as it turned out, was a profitable one.

That winter, when ranch-owner friends attended a livestock show in Denver, she invited them out to her "experimental kitchen"—actually her retail showroom. A range was turned on and the ranchers ate tasty foods frozen during the summer. She sold her first Deepfreeze that month.

It was then Miss Burnett discovered. (Concluded on next page)

Walk-in Cooler Appears As Ranchers Dine



While a group of Colorado ranchers dined in the Greeley High School auditorium, Miss Burnett's Greeley dealer set up the Wilson walk-in cooler shown in the background. The ranchers saw and were sold.

Filtrine

WATER COOLERS

STAINLESS STEEL Cafeteria Cabinet Type Water Coolers . . . all sizes. INDUSTRIAL MODELS . . . for temperatures as low as 34 degrees. Delivery Now

FILTRINE MANUFACTURING CO.
53 Lexington Ave. Brooklyn 5, N. Y.
Manufacturers of Coolers & Filters for over 40 Years

"RECO-FAB"

WALK-IN REFRIGERATORS

- STORES
- FARMS
- RESTAURANTS
- INSTITUTIONS
- FACTORIES
- DAIRIES
- FURRIERS

★ STEEL CLAD

★ 6" INSULATION

★ HEAVY DUTY HARDWARE

★ ACCESSORIES

★ LEAK PROOF JOINTS

★ EXPORT PACKED

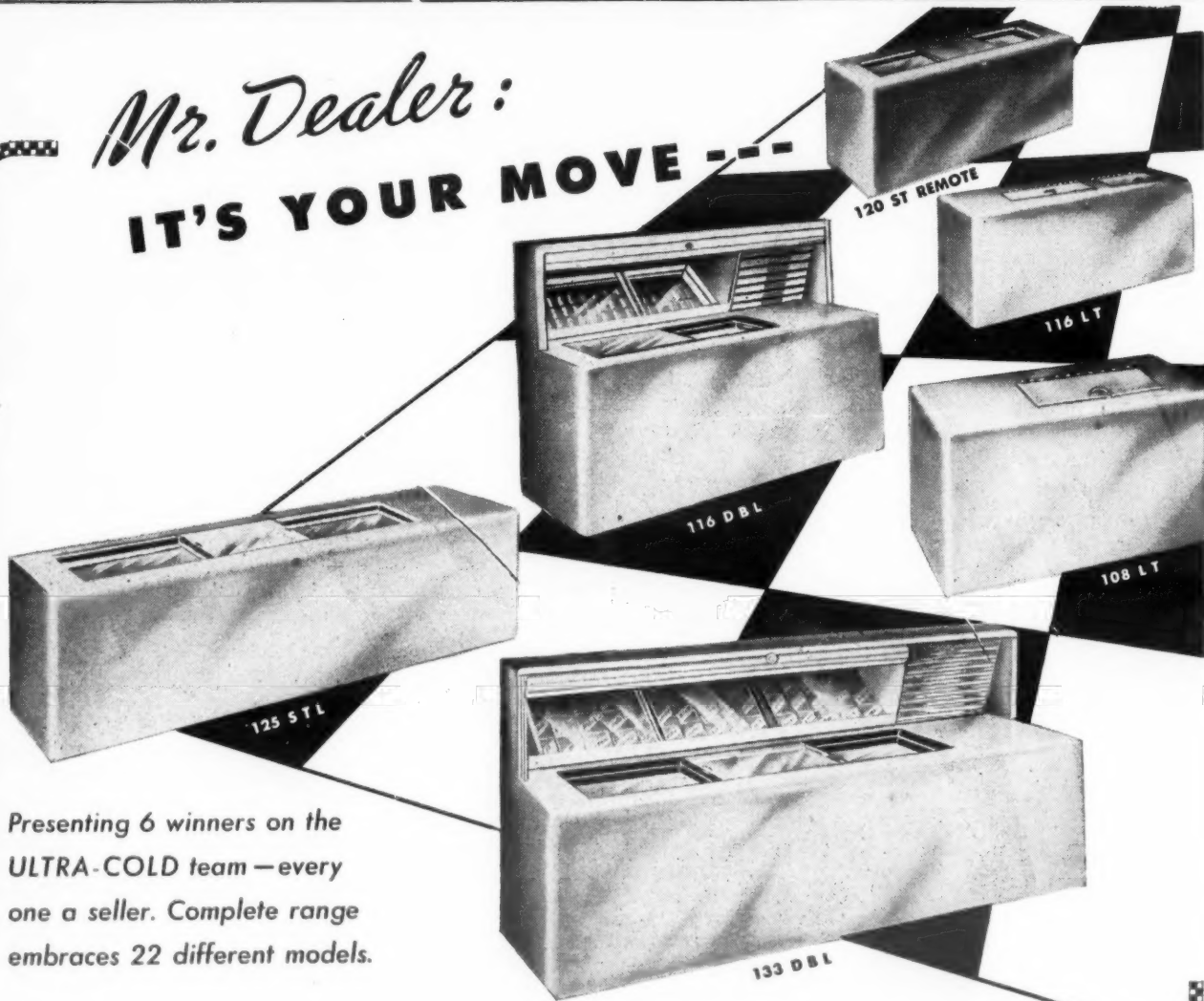
Rugged quality construction assures long life. Simple to assemble . . . move or enlarge . . . insulated for low or medium temperatures . . . available with self-contained refrigeration system.

Available in sizes from 675 to 3,400 cu. ft. capacity.

WRITE FOR A CATALOG
DEPT. ACR.
REFRIGERATION ENGINEERING CORP.
1518 WALNUT ST. • PHILADELPHIA 2, PA.
IMMEDIATE DELIVERY
Call Pennypacker 5-9913

Mr. Dealer:

IT'S YOUR MOVE ---



Presenting 6 winners on the ULTRA-COLD team—every one a seller. Complete range embraces 22 different models.

Hitch your profits to ULTRA-COLD Foremost in freezers for every need!

ULTRA-COLD—the line that features twenty-two different models in commercial and home freezers...a model for every customer...a design for every need. ULTRA-COLD Freezers are backed by nation-wide advertising ...coast-to-coast distribution. Your customers will be sold on ULTRA-COLD!

Apply today for your dealership franchise. Choice territories still open.

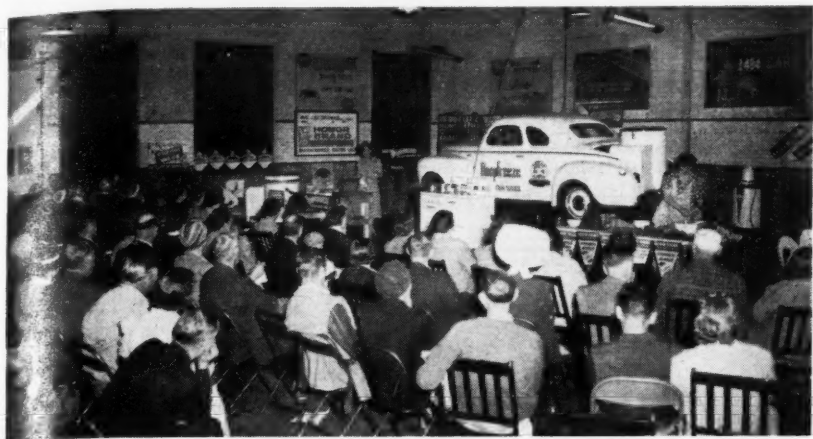
ULTRA-COLD

FREEZERS

CARL-CRAFT COMPANY
Refrigeration Division
2615 EXPOSITION PLACE • LOS ANGELES 16, CALIF.

Immediate Delivery

She Takes Her Freezer Right Along



Miss Burnett (far right) tells an interested group of citizens at Scottsbluff, Neb., all about the home freezer mounted on the back of her sales car. Her auditorium is a local garage.

Pack It with Food, Let the People Use It, And the Freezer's Sold, Miss Burnett Finds

(Concluded from preceding page)

ered that people have to eat food from a freezer before they want to own one. And it was then she began developing this idea into the merchandising plan which produced \$560,000 gross business during the spring of 1944—until shipments were curtailed.

What the war did to the freezer business hasn't changed things, Miss Burnett declares.

"It's still the only way to sell home freezers," she says. "Pack a freezer full of food, let people use it, and the unit's sold."

Another of Miss Burnett's ideas is to try to place the freezers in locker plants whenever possible.

"We know that the locker plant is the logical place to sell home freezers," she will tell you. "Housewives soon find that it is more economical to have food processed by the locker plant. They also soon learn the advantage of having large reserves of food in the locker to supplement the home freezer."

"The old-fashioned cellar and fruit closet is gone. In its stead we have the home freezer for current use and the locker plant for year round storage of seasonal foods."

Her experimental units—used by both farm and city housewives—proved that families use up to four times as much locker space with a home freezer, it is pointed out.

Still another merchandising method: promoting the use of freezers and coolers for truck gardening to adjust marketing for advantageous pricing.

And her ideas keep rolling out. Now she is planning a Freezing School of the Air to teach women the proper methods of processing, selecting, and packaging for freezing, as well as freezing, storage, and cooking operations. She believes that by educating the public to "a new

way of living," no family will be without a home freezer.

The thoroughness which Miss Burnett is applying to this project is as typical as that displayed when she wanted to know something about refrigeration. On that occasion, she donned overalls and went to work on the Deepfreeze production line.

In preparing for the radio school, she purchased one of the Herefords grown by a noted Colorado cattle breeder and arranged for the steer to be cut by a well-known authority. The breeder, meat cutter, and a prominent authority on meat will appear with her on the series of programs.

One of her thoughts on this project is to tell women how they can save freezer space by having meat boned and how to prepare soup stocks from the bones to freeze for later use.

Her merchandising tactics have been as successful with the Wilson line as with the Deepfreeze, which she has handled exclusively. Many Colorado farms, ranches, hotels, restaurants, and commercial establishments have been sold the commercial equipment.

"Back in 1942 one of my salesmen actually cried when I told him I had bought three carloads of 30-cu. ft. freezers," Miss Burnett recalls. "We sold one carload and the other two were frozen by the government before we got them. We could have sold six more."

As a result of her flare for merchandising, this active and unusual businesswoman is in demand as a speaker at meetings and conventions. Some of her recent appearances have been before conventions of the Colorado Education Association (a three-day class for western Colorado home economics teachers), the Colorado Home Economics Teachers, and the Colorado Frozen Foods Locker Association. She has also addressed the women's division of the Colorado Cattlemen's Association and several state Farm Bureau meetings.

Miss Burnett looks to the future with the optimism that might be expected.

"The war has retarded the progress of the home freezer field," she notes. "The shortages have hurt instead of helped. But when we get production rolling, the sky's the limit for home freezer sales out here."

AMA Marketing Conference Told Need for Slashing Costs of Distribution

NEW YORK CITY—Distribution costs had better be cut if most companies intend to keep their accounting departments from using red ink this year.

That opinion was expressed recently by Richard D. Crisp, sales analyst at S. C. Johnson & Son, a Racine, Wis. manufacturer of Wax-O-Namel cabinet finishes. He was addressing a two-day marketing conference of the American Management Association at the Hotel Commodore here. His views epitomized those of four others who also spoke.

"The red ink . . . is nearer than we think," warned Mr. Crisp. He pointed out that "Distribution costs do not exist in a vacuum. The approach to distribution cost reduction which pays the largest return is the approach which concentrates on positive increases in sales effectiveness."

Need for such sales effectiveness, added Mr. Crisp derives from the fact that "the rising floor of production costs and the relatively inelastic roof of selling prices" has considerably restricted the range of unit distribution costs.

"When you learn how to get more volume from the same size sales force, more sales from the sub-par territory with no increase in sales expense, or a larger average order through sales training, a positive step is being taken toward lower distribution costs," he continued.

A reduction in distribution costs was effected in his own firm, Mr. Crisp declared, even through the use of "crude analytical tools." Commenting on the setup at S. C. Johnson & Son, he explained that with

sales volume per salesman now at 366% of the 1939-41 average, sales force expenses are actually down to 42% of the average. Field sales expenses are approximately 55% and sales and administrative expenses, including advertising are reported at 68% of the average.

One of the most fruitful fields for distribution cost reduction, according to John D. Sheahan, secretary-treasurer of Drake, Startzman, Sheahan & Barclay, Inc., is in the handling and storage of materials.

"Companies that can tell within very close limits what it costs to produce an item cannot tell within 10, 20, or 50% what it costs to get that item to the wholesaler, the retailer, or the consumer," Mr. Sheahan told the group of business executives.

The sales manager, he opined, must get over the idea that the distribution end of the business is "beneath his dignity." Once this is done, the cost of distribution can be appreciably slashed by the systematic application of five general principles. They are:

1. Handle materials in large lots.
2. Avoid rehandling.
3. Balance men and equipment.
4. Select equipment best suited to the job.
5. Move materials in a straight line.

Conferees also heard Joseph Givner, president of the National Merchandising Corp., discuss the proper gauging of advertising expenditures. The advertising dollar should be measured by what it accomplishes for a company policy rather than for an advertising reputation, he said. This, of course, depends on two things: (1) What percentage of the market the company wants and (2) what the company is willing to spend to exploit new or old channels of distribution.

Dr. Ernest Dichter, psychological consultant in marketing, discussed the importance of consumer motives as they affect marketing and selling.

"One of the most important forms of sales resistance," he said, "is an unexpected resistance to such products the buying of which can be postponed."

Latest Ward Catalog Includes 6 Refrigerators

CHICAGO—Six models of electric refrigerators, ranging in price from \$163.95 for a standard 7-cu. ft. unit to \$234.95 for a 8½-cu. ft. supreme quality box, are listed in the new Montgomery, Ward, & Co. catalog for this area.

These refrigerators will be available to mail order customers only after March 15, however.

The introduction of these models into the catalog marks an improvement over the catalog issued six months ago when only four models were listed. None of those models were supreme quality, but they were offered for prices ranging from \$145.25 to \$194.25.

Brandt Heads Sales of M-H Air Conditioning Controls

MINNEAPOLIS—Appointment of Fredrick C. Brandt as sales manager of the air conditioning controls division of the Minneapolis-Honeywell Regulator Co. in the southwestern region has been announced by John E. Haines, vice president.

Mr. Brandt, who has been with the company since 1936, has been a sales engineer in the air conditioning controls division in Houston, Tex. for seven years. His headquarters will be in the regional office in Houston.

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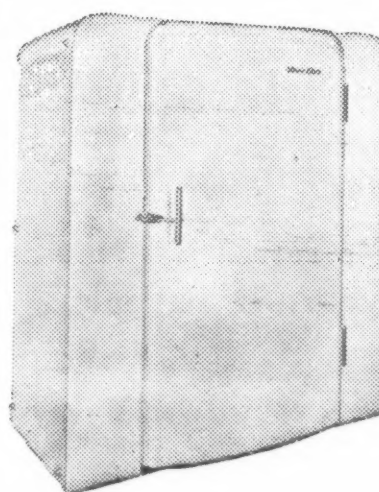
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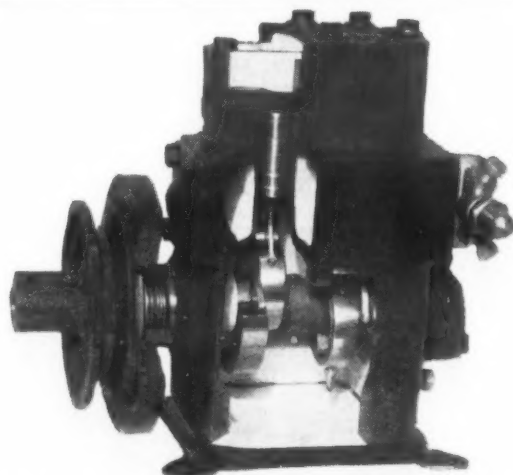
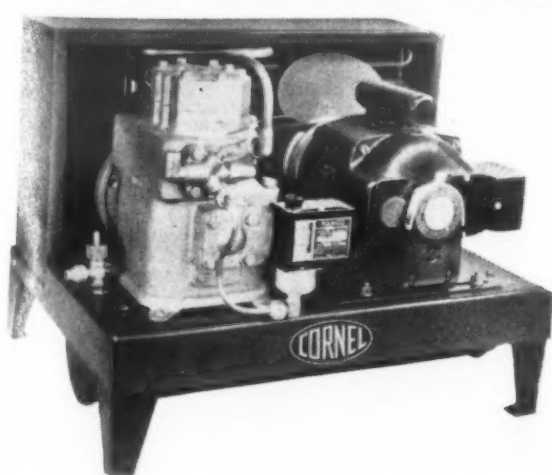
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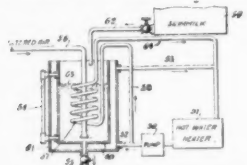
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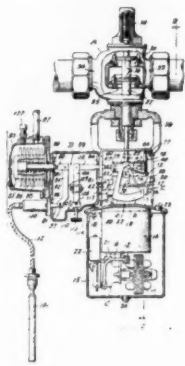
Week of Dec. 10

2,412,203. PRESERVATION OF MILK PRODUCTS. Charles Brunkhurst, Middletown, N. Y. Application April 27, 1943, Serial No. 484,716. 4 Claims. (Cl. 99-192.)



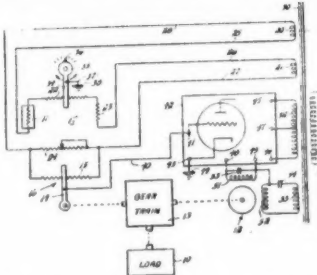
1. The method of making a frozen whole milk product from which a reconstituted milk may be made by adding water, said method comprising separating fresh whole milk into cream and skim milk, subjecting the cream to a sufficiently high temperature to pasteurize it without removing volatile matter, subjecting the skim milk to pasteurizing temperature to reduce the water content in a concentration ratio by volume of between 2½ to 1 and 4 to 1, homogenizing the hot concentrated milk and cream together to break up the solids, reducing the temperature of the

2,412,218. CONTROL DEVICE. Milton Hilmer, Center Valley, and George J. Signarovitz, Allentown, Pa., and Thomas Napier Adlam, West Orange, N. J., assignors to Sarco Co., Inc., New York, N. Y., a corporation of New York. Application Aug. 31, 1944, Serial No. 552,190. 8 Claims. (Cl. 236-74.)



6. In a control device, a valve for permitting the passage of a medium through to a receiver, means for actuating said valve, electrical means for operating said valve actuating means, an electrical switch in circuit with said electrical means, a pair of spaced plungers, means interposed between said receiver and one of said plungers and acted upon by and responsive to the pressure of the medium in the receiver for moving said plunger in response to pressure changes of the medium, thermo-sensitive means located exteriorly of said receiver, means interposed between the other plunger and said thermo-sensitive means and responsive thereto for moving the same in response to temperature changes exteriorly of said receiver, a lever connected at its opposite ends to said plungers respectively for movement therewith, a second lever having an abutment defining a fulcrum against which the first lever engages, means operatively engaging said second named lever and said switch for actuating said switch by the movements of said plungers effecting movement of said levers to thereby control the operation of said electrical means and valve actuating means so as to regulate the flow of the medium through the valve in accordance with pressure changes of the medium in the receiver and temperature changes exteriorly thereof, and said abutment being adjustable longitudinally of said named lever for regulating the device to render the same adaptable for varying pressure and temperature ranges.

2,412,263. CONTROL APPARATUS. Henry E. Hartig, Robbinsdale, Minn., assignor to Minneapolis-Honeywell Regula-



tor Co., Minneapolis, Minn., a corporation of Delaware. Application Feb. 24, 1943, Serial No. 476,907. 8 Claims. (Cl. 172-239.)

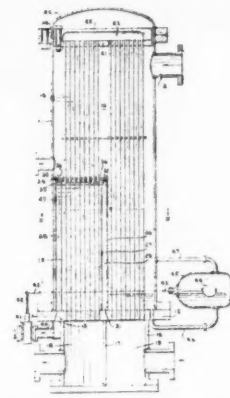
1. Temperature control apparatus, comprising in combination, a pair of sources of electrical energy, a pair of impedance means, means connecting said sources and said impedance means alternately in a series circuit, one of said impedance means comprising, in series, a temperature responsive resistance element and a fixed resistance element, the other of said impedance means comprising a potentiometer resistance element, said potentiometer resistance element having a contact slidable with respect thereto to complete an electrical connection with any of a plurality of spaced points thereon, temperature control means, electrical motor means for driving said temperature control means and said slidable contact, and potential responsive means for controlling said motor means connected between said contact and a point on said other impedance means intermediate said temperature responsive resistance element and said fixed resistance element.

Week of Dec. 17

2,412,573. HEAT EXCHANGE APPARATUS. Walter G. Fraser, Jr., Prospect Park, Pa., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application April 15, 1942, Serial No. 438,972. 6 Claims. (Cl. 257-32.)

1. A heat exchanger comprising a vertically-disposed shell having a steam

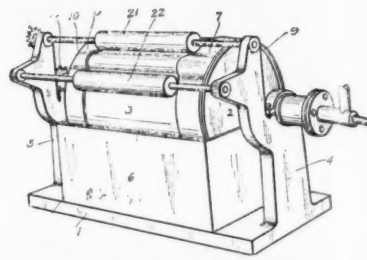
inlet and a condensate outlet, a plurality of tubes extending vertically of said shell, waterbox structure associated with said tubes and providing for circulation of water through the latter in a plurality of passes, and means segregating a section of the heat exchanger which includes the condensate outlet and the cold ends of the tubes of the first water pass from the remainder of the heat exchanger to define a subcooler, said means including a pair of vertical partitions arranged in spaced substantially parallel relation to define



therebetween a vertical passageway communicating at the bottom with the lowest portion of the heat exchanger condensing

space and communicating at the top with the interior of the subcooler for flow of condensate from the condensing space to the subcooler interiorly of the shell.

2,412,621. HEAT TRANSFER DEVICE. Frank W. Knowles, Seattle, Wash. Application June 20, 1944, Serial No. 541,206. 6 Claims. (Cl. 62-706.)



1. A refrigerating apparatus, comprising: a refrigerated drum, means insulating the ends of said drum, an endless, impervious, flexible belt, longer than the circumference of the said drum, and placed around and in contact with said drum, means preventing progressive movement between said drum and belt, and sealing the entire length of the edges of said belt to the ends of said drum, and means for maintaining all but a small portion of said belt in contact with said drum.

(To Be Continued)

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RATES for all other classifications \$5.00 per insertion. Limit 50 words.
ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS WANTED

FACTORY REPRESENTATIVE—proven executive and sales ability, engineering education, 18 years in refrigeration and air conditioning, experienced contacting manufacturers, jobbers, and distributors as sales and application engineer. Wants position with manufacturer as field representative working out of St. Louis, Mo. Salary or commission basis. References. BOX 2211, Air Conditioning & Refrigeration News.

COMPETENT AIR-CONDITIONING and refrigeration sales engineer. Forty years old, 20 years wide experience in the industry with large well-known companies. Desire to locate in southwestern state. Best history of experience with excellent references. Available Feb. 1st. BOX 2218, Air Conditioning & Refrigeration News.

DESIGN ENGINEER, 33, married, background covers design, sample building, experimentation and production of small commercial and domestic refrigerators. Seven years experience. Specific abilities include design and cabinet structure. Capable and experienced in holding supervisory positions. Can furnish excellent references. BOX 2222, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

HIGH CALIBER salesman to represent York refrigeration Lancaster and York Counties. Man qualifying can net \$10,000 a year. Hard work and experience commercial refrigeration and air conditioning necessary with established awake organization. Fine territory. Communications will be confidential. Address: CHARLES EYSTER, President, GOODLING ELECTRIC CO., York, Pa. giving qualifications.

SALES ENGINEER—\$300 per month, plus commission, if you qualify. Only man with proven sales ability; complete refrigeration; air conditioning engineering, sales experience need reply. Knowledge of store-bar fixtures helpful. Must be able to figure-cost all jobs as well as sell them. REFRIGERATION SALES CO., 5638 Hohman Ave., Hammond, Ind. Sheffield-500.

SALES ENGINEER—G.E. commercial refrigeration distributor in northern New Jersey requires services of energetic application's engineer capable of taking full charge of our air conditioning and industrial refrigeration department. Must be experienced. College education preferred. State all qualifications including starting salary. BOX 2200, Air Conditioning & Refrigeration News.

CHICAGO DISTRIBUTOR, foremost nationally known line of commercial and air conditioning equipment, coils, coolers, etc., requires experienced, capable salesman to contact dealers. Must have a successful background. Unusual opportunity for a permanent connection with top rate earnings. Give full details in your letter. Enclose snapshot. BOX 2215, Air Conditioning & Refrigeration News.

SCHOOL SUPERINTENDENT and refrigeration instructors: for refrigeration school in midwest, superintendent preferably with experience in operation of trade or refrigeration school combined with practical refrigeration experience. Instructors with practical experience in refrigeration, preferably with teaching experience. Salary commensurate with ability. State age, experience, and salary. BOX 2219, Air Conditioning & Refrigeration News.

WANTED: DISTRICT Managers for nationally advertised, quality line of complete refrigeration equipment manufacturers. Must have executive ability. References necessary. BOX 2221, Air Conditioning & Refrigeration News.

DESIGN-ENGINEERS—production: Well known established company has openings in its engineering organization for several men having experience in design and production of tube and fin heat transfer surface and of steam heating and ventilating units. Opportunities for qualified men. Location midwest. Reply BOX 2223, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WANTED to buy for export new domestic refrigerators, electric or gas, large quantities—all sizes and makes. State prices and deliveries. Deliveries over extended periods will be considered. Excellent opportunity for small manufacturers to share in export trade. BOX 2212, Air Conditioning & Refrigeration News.

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CONDENSING UNITS (Genuine) ¼ and ½ hp. complete. Write for particulars and prices. Good quantities available. **DRAFT-MASTER REFRIGERATION, INC.**, Designers-Manufacturers, 1703-5 W. Baltimore St., Baltimore 23, Md. Gilmer 2185—Edmondson 4542.

FOR SALE: 1,000 new flip covers and frame assemblies for freezers and ice cream cabinets. Two popular sizes. ¼ to 2 hp. new and remanufactured condensing units, also new aluminum ice cube trays. **EDISON COOLING CORP.**, 310 E. 149th St., Bronx 51, N. Y.

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HOME and farm freezers, dry beverage coolers, ice cream cabinets, open type frozen food cases, with superstructure, reach-in refrigerators. All equipment with and without units. Immediate delivery, attractively priced, exclusive distributorships available. **GENERAL REFRIGERATORS CORP.**, 678 Broadway, NEW YORK 12, ST 9-1222.

NEW OSBORN #85 National meat slicers, immediate delivery. Quantity limited. **\$137.50 GENERAL TRADING CO.**, BOX 1000, Danville, Va.

1000 MOTORS, FOR sale, from stock ¼ hp.—3425 RPM—3 ph/230 V. (Under-rated—easily equal to ¾ hp.) Ball-bearing, for vertical or horizontal. Enclosed Fr. ¾ in. shaft. \$36 each. This rugged motor cannot burn out. (Glass insulated wire coils.) **MODERN SUPPLY CO.**, 206 Fulton St., New York 7—CO 7-0100.

FOOD FREEZERS, Immediate delivery on cabinets only. 12, 16, 19, 22, and 26-cu. ft. models. Write for prices and information to **RATHBUN REFRIGERATION CO.**, 325 Scribner Ave., N.W., Grand Rapids, 4, Mich. Distributor and dealer franchises open in several territories.

COMPRESSORS AND PARTS rebuilding—Compressors, float valves, water valves, low pressure controls, evaporators, water cooled condensers, condensing units and many other items replaced from our large stocks, or repaired upon receipt of your defective material. Send for our catalog-prices listed. **REFRIGERATION MAINTENANCE CORP.**, 321 E. Grand Ave., Chicago, Ill.

IMMEDIATE DELIVERY—new Copeland units with motors. Model 204 AFL—2 hp.—1PH—220 V—\$345. Model 304 WFL—3 hp.—1PH—220 V—\$465. New sectional storage coolers. 6 ft. wide, 8 ft. long, 6 ft. 6 in. high. Door in end. Dry fir lumber. 4 in. insulation, \$365. **M. E. ROBERTSON**, 2913 Columbia Road, Madison, Wis.

4 PANELECTRIC AUTOMATIC ice cube makers, new, model 40-C; complete. Offer at \$100 less than original cost. 2-240 gallon hardening cabinets new with 3-hp. compressor. Made by Super-Cold, can be used as food freezer cabinet. **ROYAL STORE EQUIPMENT DIST., INC.**, 103-107 East Third, Cincinnati 2, Ohio.

15 SODA WATER carbonators, electric type, new, made by Lewis Automatic Electric Carbonator Co., without motors; selling out at 10% less distributors cost. Who need 'em? We are not geared to sell carbonators. Want to sell them out fast. **ROYAL STORE EQUIPMENT DIST., INC.**, 103-107 East Third, Cincinnati 2, Ohio.

FLOAT REPLACEMENTS, For replacing defective high side floats on all household units. Regular charging connection, capillary tube setup, internal strainer and exact mounting plate. Part #2000-Westinghouse (4 hole plate), and

#2010 (3 hole plate); Part #2020-Gibson; Part #2030-General Electric (DR-1 & DR-2). Part #2040-For general replacement (undrilled plate). \$6.75 each. **SEALED UNIT PARTS CO.**, 3097 Third Ave., New York 56.

SEALED CROSLLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three \$6.75 (Part No. 1020). Installation tool \$1.65. Immediate delivery. Money-back guarantee. **SEALED UNIT PARTS CO.**, 3097 Third Ave., New York 56, N. Y.

FRIGIDAIRE METER-MISER Terminals. Installed from the inside. Fits compressors with bottom-mounted terminals (Part No. 1060). Set of three \$2.85. **WESTINGHOUSE TERMINALS**. Installed from the inside. (Part No. 1030). Set of three \$2.85. **SEALED UNIT PARTS CO.**, 3097 Third Ave., New York 56, N. Y.

NORGE CHECK VALVES. For open-type units. (Part No. 1040). \$2.55 each. **SEALED NORGE** terminal, packing washers. For repairing leaky terminals. Installed from the outside in a few minutes. (Part No. 1050). Three sets (9 washers) \$1.00. **SEALED UNIT PARTS CO.**, 3097 Third Ave., New York 56, N. Y.

SEALED NORGE terminals. Complete assembly. Replaces shorted terminals. Installed from inside. (Part No. 1100). Set of three \$2.85. Sealed Crosley terminals. Installed from inside. Part No. 1070 for SO2 models. Part No. 1080 for "F-12" models. Part No. 1090 for "F-21" models. Set of three \$2.85. **SEALED UNIT PARTS CO.**, 3097 Third Ave., New York 56, N. Y.

COLDSPOT & BOHM compressor parts. Check valve sets consists of six parts: 1-spring, 1-brass valve cage, 1-ball, 1-disk, 1-new seat, 1-Neoprene washer. \$2.50. Aluminum pump vanes, 4 to a set. (State size when ordering) \$2. Flexible rubber coupling. \$2.50 each. **SPINELLO ENGINE CO.**, 99 Woodland Ave., Kearny, N. J.

UNDERBAR WORKBOARDS, cocktail stations, dry beverage coolers and beer dispensers designed for water bath, circulating air, Temprite tanks and Penfo cooling systems for immediate delivery. by one of the oldest bar interior equipment manufacturers in the East. **SUPREME METAL FABRICATORS, INC.**, 27 Rodney St., Brooklyn 11, N. Y.

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Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration
and Air Conditioning
Division, Perfex Corp.

Electric Currents (7)

CAPACITIVE REACTANCE CAUSES LEADING CURRENT

Capacitive reactance, although it impedes the flow of electricity in the circuit, as does inductive reactance, acts in a different manner than inductive reactance. Inductive reactance holds back the current and causes it to lag the voltage. But capacitive reactance holds back the voltage and thus allows the current to lead the voltage.

In a circuit having capacitive reactance only, the current would lead the voltage a full 90 degrees as shown in Fig. 4. In such a case the voltage would be at maximum when the current was at minimum or zero and vice versa. Thus, although from different causes, the effect would be very much the same as if the circuit had in it inductive reactance only as shown in Fig. 3.

Thus the two types of reactance, inductive and capacitive, act oppositely and against one another. In a circuit containing both inductive reactance and capacitive reactance the two would oppose one another and tend to bring the current more nearly in step with the voltage. In fact if the inductive reactance and the capacitive reactance were exactly equal the current would be in phase, that is, in step with the voltage, just the same as if the circuit contained pure resistance only, with no reactance of either type present. (See Fig. 5.)

It therefore appears that in the case of alternating current, the flow of the current is impeded not only by the pure resistance but by reactance also; the latter consisting of the two kinds, inductive and capacitive.

Like resistance, reactance, either inductive or capacitive is measured in ohms, and again, an ohm is the "hold-back" or resistive effect in a circuit or part of a circuit whose voltage is one volt, that allows just one ampere of current to flow. This is true whether the resistive effect

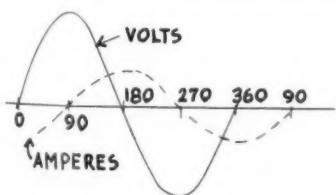


Fig. 4—Typical alternating current curves for a circuit having only capacitive reactance. Here the current leads the voltage.

is due to resistance only, reactance only (either inductive or capacitive), or a combination of any two or of all three.

Theoretically, a circuit must contain all three of these, although one or two may be in almost negligible amounts. In practice, the combined effect which is known as "Impedance" includes resistance and reactance, both in quantities which cannot be neglected.

If we are dealing with direct current only, reactance may and usually is ignored and the pure resistance only of the circuit considered and included in calculations. In alternating current circuits, impedance must be used instead of resistance only for impedance includes both resistance and reactance.

Above, we found that the effects of inductive and capacitive reactances are opposite in character and effect, so their combined effect is found by subtracting one from the other, the difference being the total reactance in the circuit.

TOTAL REACTANCE EQUALS INDUCTIVE MINUS CAPACITIVE REACTANCES

If L equals the total reactance, Li equals the inductive reactance and Lc equals the capacitive reactance then:

$$L = L_i - L_c$$

or if the capacitive reactance is greater it would be:

$$L = L_c - L_i$$

If the inductive reactance Li is greater in a combined circuit than the capacitive reactance Lc (and it usually is in power circuits due to the presence of motors, transformers, and other apparatus with high inductance) then the predominating reactance is inductive reactance and the current will lag the voltage. If, conversely, the capacitive reactance is greater, then it will predominate and the current will lead the voltage in the combined circuit.

TOTAL REACTANCE MAY BE ZERO

If, in a circuit containing resistance and inductive and capacitive reactance, the inductive reactance and the capacitive reactance are exactly equal to one another, then they will offset one another and only the resistance effect will be left and the current and voltage will be in step or "in phase," neither leading or lagging.

But the impedance of the circuit is not found by simply adding the resistance and the reactance. It is found by squaring the resistance, squaring the reactance, adding the squares together and taking the

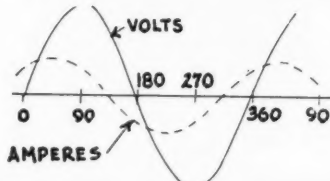


Fig. 5—Typical alternating current curves for a circuit having both resistance and reactance. Here the current lags the voltage approximately 45 degrees.

square root of the result. This is just like finding the hypotenuse of a right triangle, which is the square root of the sum of the squares of the two sides.

If the impedance is Z, then

$$Z = \sqrt{R^2 + L^2}$$

if R is the resistance and L is the reactance, both in ohms (the total reactance L will already have been found by subtracting the capacitive reactance from the inductive reactance or vice versa, depending upon which is the greater).

Thus in alternating current, Ohm's Law may be rewritten to substitute impedance for resistance.

$$\text{Current (in amps)} = \frac{\text{Voltage (in volts)}}{\text{Impedance (in ohms)}}$$

$$\text{Impedance (in ohms)}$$

Since impedance includes resistance, inductive reactance and capacitive reactance we can expand Ohm's Law to include all these factors as follows:

$$C = \frac{V}{\sqrt{R^2 + (L_i - L_c)^2}}$$

What has all this to do with refrigeration? It must be known in order to properly understand what wattage is, what power-factor is and what effect it has, what the basic difference is between split-phase and capacitor motors and why three phase motors do not require starting coils or capacitors. These and allied subjects will be discussed in future articles.

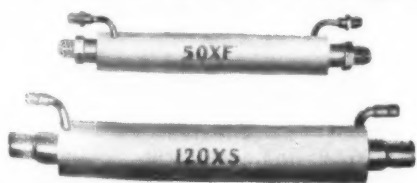
(To Be Continued)

Kaul Equipment Co. Expands Facilities In Lone Rock, Wis.

LONE ROCK, Wis. — At Lone Rock, Wis., the Kaul Equipment Co. has been expanding its facilities.

In the display room there will be a 72-ft. front show case, and a supply part department has been added at the rear of the store. When completed, the firm will put in a large line of electrical appliances and farm equipment of the latest type.

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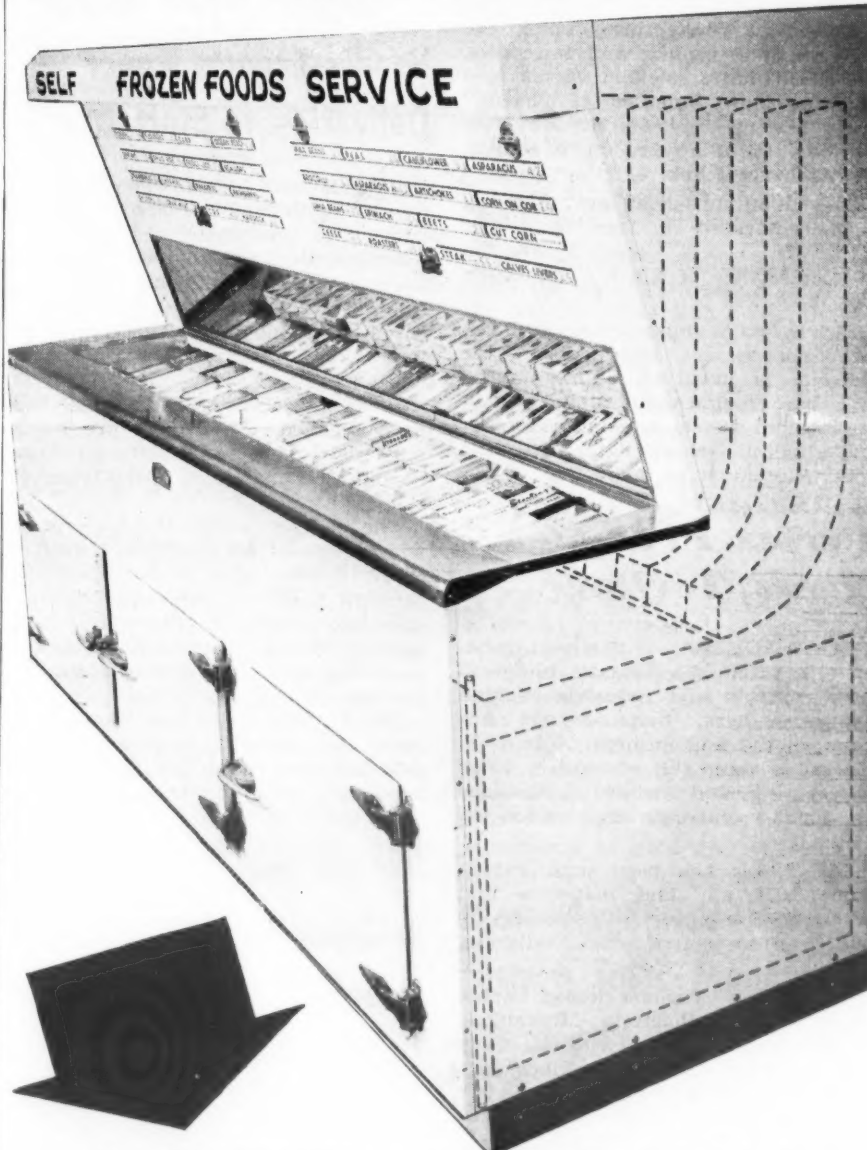
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- All doors double gasketed.
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Pilot Gemco Activities



J. H. SCHREIBER and W. R. VOGEL

Stockholders Choose
Gemco Directors for 1947

ST. LOUIS—Stockholders of the General Engineering & Mfg. Co. recently elected the following directors for 1947: John H. Schreiber, Willard R. Vogel, W. A. Schreiber, C. W. V. Kaeuffer, Ernest Gyax, James S. McClellan, and J. F. Tegeler.

John H. Schreiber is president of the company and Mr. Vogel is vice president.

Mr. Schreiber announced that Gemco had delivered its first packaged type air conditioner, and that peak production should be reached sometime this summer.

WAA Offers Aluminum,
Refrigeration Goods

WASHINGTON, D. C.—A few refrigeration units, approximately 175,000 lbs. of aluminum sheet, and miscellaneous aluminum and magnesium shapes are being offered for sale on a competitive bid basis by the War Assets Administration during early February.

Two York refrigeration units, five blowers, nine cooling and fan units, six Electromatic solenoid valves, and an unspecified number of "Freon" units are up for sale at the New York Naval Shipyard in Brooklyn. Bidding closes Feb. 6.

The aluminum sheet, said to be all new, is located at Robertson, Mo. Bids are being accepted at the St. Louis office of the WAA through Feb. 6.

Seven lots of miscellaneous aluminum shapes are being offered at Detroit. Included are aluminum rod and bar, magnesium tubing, plain magnesium sheet, aluminum tubing, and aluminum sheet plate, strip, and coil. Bids must be in by Feb. 12.

Perfex Promotes
Neess, Toellner

MILWAUKEE — Perfex Corp., manufacturer of automatic temperature controls and industrial engine radiators here, has recently announced the appointment of Paul F. Neess as manager of control sales engineering, and Richard E. Toellner as district manager with offices in Detroit.

Mr. Neess has been with Perfex since 1936 as chief inspector and chief test engineer. Previously he had been associated with Shalcross, Inc.

In 1946 Mr. Toellner joined Perfex as a field engineer in Milwaukee. Prior to this he served with the Navy for three years. Mr. Toellner succeeds S. David Horner, who left Perfex to enter his own business.

AIR CONDITIONING

One of CARRIER'S leading distributors of Air Conditioning and Refrigeration equipment needs Installation Superintendent. Must have had at least five years experience on installation of units from 5 to 100 Tons capacity. Excellent opportunity for man with vision and executive ability. Substantial Salary and Bonus.

TRinity 3-5500

JAMES and ROACH, Inc.

282 East Milwaukee,
Detroit 2, Michigan.

Heating Show --

(Concluded from Page 1, Column 5) manufacturing executives, and field representatives, the following information and estimates on production, material shortages, and other matters came to light.

1. Norge has made five different projections of its 1947 production estimates, varying in terms of availability of materials, and other factors. Sheet steel and motors will be the critical materials, with sheet steel possibly the more critical.

2. Installations of new heating equipment for homes last year (both for new homes and conversion of old equipment) was divided up about as follows:

Gas-fired equipment 52%
Coal-fired equipment 27%
Oil-fired equipment 21%

(Of the oil-fired equipment, about 80% went into conversion jobs, and 20% in new homes.)

3. Because of the shortages of gas for fuel purposes, and the mounting evidence that the majority of people want oil-fired equipment, the government will give more assistance to manufacturers of oil-fired equipment this year. This is expected to result in a higher ratio of oil-fired equipment, and as new home building picks up, there will be more complete new units installed.

4. The matter of when the "buyer's market" in home heating equipment will come is a matter of speculation. Some say backlogs of orders extend only 6 to 8 weeks. Others think that they may be as much as 6 months. To find an analogy, it was pointed out that in the case of vacuum cleaners, a buyer's market was reached after pre-war production had been achieved for four consecutive months.

5. The buyer's market is probably much farther away in cooling systems for air conditioning purposes, because of the great lag in production and installation of such equipment in 1946.

Bendix Expects Ironer
Deliveries to Start Mar. 1

SOUTH BEND, Ind.—Though shipments of the new Bendix automatic ironer are now being made to distributors, dealers will not be able to make deliveries on them to customers until approximately March 1, W. F. Linville, general manager of Bendix Home Appliances, Inc. here has announced.

Until a production backlog has been reached, the ironers are being allocated to selected dealers for store demonstrations only, Mr. Linville said.

The deluxe model Bendix ironer, which retails at \$199.50, features three usable open ends, operation through knee and fingertip controls, complete visibility of controls and ironing, height adjustments to fit the operator, and dual thermostats, he pointed out.

Mr. Linville added that Bendix expects to make first shipments to selected dealers on its new tumble type automatic dryers soon.

Both the ironer and the dryer are being produced in Detroit by the Buhl Mfg. Co.

Reliance Electric Appoints
Hough to Replace Pollard

CLEVELAND—A. R. Hough has been named southern sales representative for The Reliance Electric & Engineering Co., with headquarters in Knoxville, Tenn., it is announced by E. E. Helm, sales vice president.

Mr. Hough succeeds Arthur L. Pollard who has announced his retirement as a manufacturer's representative.

In his new post Mr. Hough will represent not only Reliance but four other manufacturers of electrical equipment, Mr. Helm said. These are: The Weston Electrical Instrument Corp., Newark, N. J.; The Meriam Instrument Co., Cleveland; The Cornell Dubilier Electric Corp., (power factor improvement division), South Plainfield, N. J.; and The Superior Electric Co., located at Bristol, Conn.

A graduate in electrical engineering from the University of South Carolina, Mr. Hough has had wide experience in field engineering work including 17 years with the Weston Corp.

Joins Ben Bar



HARRY J. JESSEL

Sales, Advertising Post
Goes to H. J. Jessel

MILWAUKEE — Announcement of the appointment of Harry J. Jessel as general sales and advertising manager of Ben Bar Sales, Inc., has been made by August G. Barkow, vice president and general manager of the firm.

Mr. Jessel will direct the sales activities of the Ben Bar distributor-dealer organization, and will have charge of the company's sales promotion and advertising.

Small Motor Standards
Praised by C. P. Potter

NEW YORK CITY — Standardization of small electrical motors as a result of standards recently adopted by the National Electrical Manufacturers Association will improve servicing and performance of refrigerators, pumps, and similar appliances, members of the American Institute of Electrical Engineers were told last week at their Winter Meeting in the Engineering Societies Bldg. here.

Previous requirements were not sufficiently definite on the subjects of fractional horsepower torque and overload, explained C. P. Potter of Wagner Electric Corp. This made it necessary for purchasers to test each manufacturer's motor on his device before he could be sure of its performance.

Fractional horsepower motors are used in room coolers, washing machines, ironing machines, stokers and oil burners, blowers, unit heaters, circulating pumps for heating systems, air compressors and domestic water pumps, Mr. Potter pointed out.

"Motor manufacturers have done a good job in producing reliable motors," Mr. Potter stated. "Every fractional horsepower motor has a horsepower rating stamped on its nameplate and this would seem to be a rather definite indication of its capabilities."

"However, this is not necessarily true, because motor characteristics are frequently modified to suit the desires of the manufacturer of the device which they operate," he asserted.

E. R. Godfrey Elected
GM Vice President

DAYTON, Ohio — E. R. Godfrey, general manager of Frigidaire, was elected a vice president of General Motors Corp., during a recent meeting of the board of directors in New York City. Mr. Godfrey, who will continue in his present position at Frigidaire, is also serving as chairman of the General Motors Plant City committee in Dayton.

Mr. Godfrey has been with General Motors and one of its predecessors, the old Remy Electric Co. of Anderson, Ind., for 28 years. From 1923 to 1930 he was superintendent of various Delco-Remy plants and was then transferred to Dayton as works manager over all the Frigidaire factories. In 1940 he was made assistant general manager of the division and in 1943 he became general manager.

P. E. Daubenspeck, Jr.
Leads Equipment Group

DETROIT—P. E. Daubenspeck, Jr. of P. E. Daubenspeck, Inc. of Pontiac, Mich. was elected president of the local Food Equipment Dealers Association here last week. G. D. Lunn of Lunn Bros., was named vice president.

Retiring president I. Wolf of the McCray Refrigerator Co. was voted an honorary member of the Association's board of directors.

Raymond W. Shock, attorney, will continue as secretary and treasurer.

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LOCKER PLANTS
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